Analytical Data Package Prepared For

Pacific Northwest National Lab

Radiochemical Analysis By

STL Richland STLRL

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Data Package Contains _____ Pages

Report Nbr: 34468

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		B1LJ83	J6L290150-2	JL8XA1AA	9JL8XA10	7008361
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		B1LJJ8	J6L290153-4	JL81D1AA	9JL81D10	7008361
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Comments:

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B1LJW0 J7A040243-1 JMER91AF 9JMER910 70083 B1LJX0 J7A040243-2 JMETL1AA 9JMETL10 70083			B1LJW0	J7A040243-1	JMER91AD	9JMER910	7008352
B1LJX0 J7A040243-2 JMETL1AA 9JMETL10 70083			B1LJW0	J7A040243-1	JMER91AE	9JMER910	7008355
			B1LJW0	J7A040243-1	JMER91AF	9JMER910	7008356
B1L,JX0 .J7A040243-2 .JMETL1AC 9.JMETL10 70083			B1LJX0	J7A040243-2	JMETL1AA	9JMETL10	7008350
<u> </u>			B1LJX0	J7A040243-2	JMETL1AC	9JMETL10	7008351
B1LJX0 J7A040243-2 JMETL1AD 9JMETL10 70083			B1LJX0	J7A040243-2	JMETL1AD	9JMETL10	7008352

Report Nbr: 34468

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05087	G07-012	B1LJX0	J7A040243-2	JMETL1AE	9JMETL10	7008355
		B1LJX0	J7A040243-2	JMETL1AF	9JMETL10	7008356



STL Richland 2800 George Washington Way Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590

www.stl-inc.com

Certificate of Analysis

Pacific Northwest National Laboratories Sigma V Building Richland, WA 99352

February 12, 2007

Attention: Dot Stewart

SAF Number

W07-012, I07-015, S07-012, A07-012, G07-012

Date SDG Closed

January 3, 2007

Number of Samples

Twenty (20)

Sample Type SDG Number Water W05087

Data Deliverable

45-Day / Summary

CASE NARRATIVE

I. Introduction

Between December 28, 2006 and January 3, 2007 twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Pacific Northwest National Laboratories (PGW) specific IDs:

PGW ID#	STLR ID#	DATE OF RECEIPT	MATRIX
B1LJ98	JL8XV	12/28/06	WATER
B1LJJ3	JL8XP	12/28/06	WATER
B1LJ83	JJ8XA	12/28/06	WATER
B1LJ78	JL8W7	12/28/06	WATER
B1LJJ8	JL81D	12/28/06	WATER
B1LJD6	JL809	12/28/06	WATER
B1LJ88	JL804	12/28/06	WATER
B1LJ68	JL80T	12/28/06	WATER
B1LK68	JL814	12/28/06	WATER
B1LF70	JMEFC	01/02/07	WATER
B1LDC7	JMEMH	01/02/07	WATER

B1LDB2	JMEMG	01/02/07	WATER	
B1LDC2	JMEME	01/02/07	WATER	
B1LD92	JMEL7	01/02/07	WATER	*
B1LC42	JMEQ5	01/02/07	WATER	
B1LC39	JMEQA	01/02/07	WATER	
B1LJT1	JMERQ	01/03/07	WATER	
B1LJR9	JMERP	01/03/07	WATER	
B1LJX0	JMETL	01/03/07	WATER	
B1LJW0	JMER9	01/03/07	WATER	

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014 Gross Beta by method RICH-RC-5014 Strontium-90 by method RICH-RC-5006

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017 Iodine-129 (LL) by method RICH-RC-5025

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065

Tritium by method RICH-RC-5007

Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1LJX0) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1LDB2) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1LJW0) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017:

The LCS, batch blank, samples and sample duplicate (B1LJW0) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025:

The LCS, batch blank, samples and sample duplicate (B1LK68) results are within contractual requirements.

Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065:

The LCS, batch blank, samples, sample duplicate (B1LJ78), and sample matrix spike (B1LJ83) results are within contractual requirements.

Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1LJW0) results are within contractual requirements.

Total Uranium

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1LJR9), and sample matrix spike (B1LJT1) results are within contractual requirements.

Pacific Northwest National Laboratories February 12, 2007

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Sherryl A. Adam

Project Manager

Drinking Water Method Cross References

	DRINKING WATE	ER ASTM METHOD CROSS REFERENCES
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-24	11 (unless otherwis	se specified in the case narrative)
The Gross Beta LCS is prepared with Sr/Y-90) (unless otherwise	e specified in the case narrative)

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_r) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

	Report Definitions
Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u_{c} _ Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than I may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D)/[sqrt(TPUs^2 + TPUd^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

2/12/2007 12:24:35 PM

STL Richland Report

Lab Code: STLRL

Sample Id: Id 9JL80410 B1LJ8 Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id 9JL80910 B1LJD Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id	alyte CAS# 99 14133-7 lient Test Id: User JD6 alyte CAS# 99 14133-7 lient Test Id: User	Contract Nbr MW6-SBB-A1 Result	Unit pCi/L SAF Nb W07-012 Unit pCi/L	Nbr: W05087 CntU 2S 1.5E+01 r Sdg Nbr:	TotU 2S 5.4E+01 QC Type	e: Qual		Distilled Volume TrcYield -00 100.0 Distilled Volume	Sample On Date: Method TC99_ETVDSK_LS Sample On Date:	Alq Size 1.253E-01	12/28/2 Unit L	llection Date: 2006 09:21 Analy Date/Time 01/23/2007 19:37	Act
Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id 9JL80910 B1LJD Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id	alyte CAS# 99 14133-7 lient Test Id: User JD6 alyte CAS# 99 14133-7 lient Test Id: User	Result 7.08E+02 Contract Nbr MW6-SBB-A1 Result 6-7 2.49E+03 Contract	Unit pCi/L SAF Nb W07-012 Unit pCi/L	CntU 2S 1.5E+01 r Sdg Nbr: W05087	TotU 2S 5.4E+01 QC Type	:	9.93E4	-00 100.0 Distilled	TC99_ETVDSK_LS	•	Unit L Col	Analy Date/Time 01/23/2007 19:37	
TC-99 Lab Clie Sample Id: Id 9JL80910 B1LJD Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id	99 14133-7 lient Test ld: User JD6 alyte CAS# 99 14133-7 lient Test ld: User	Contract Nbr MW6-SBB-A1 Result 6-7 2.49E+03	pCi/L SAF Nb W07-012 Unit pCi/L	1.5E+01 r Sdg Nbr: W05087	5.4E+01 QC Type	:	9.93E4	-00 100.0 Distilled	TC99_ETVDSK_LS	•	Col	01/23/2007 19:37	
Sample Id: Id 9JL80910 B1LJD Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id	Id: User UD6 alyte CAS# 99 14133-7 Client Test Id: User	Nbr MW6-SBB-A1 Result 6-7 2.49E+03 Contract	W07-012 Unit pCi/L	Nbr: W05087 CntU 2S	Туре			Distilled	Sample				
Batch Analy 7008361 TC-99 Lab Clie Sample Id: Id	alyte CAS# 99 14133-7 client Test Id: User	Result 2.49E+03 Contract	Unit pCi/L	CntU 2S								Date:	
7008361 TC-99 Lab Clie Sample Id: Id	99 14133-7 lient Test ld: User	6-7 2.49E+03 Contract	pCi/L		TotU 2S						12/28/2	2006 10:10	
Sample Id: Id	ld: User		045.11		1.7E+02	Qual		TrcYield -00 100.0	Method TC99_ETVDSK_LS	Alq Size 1.256E-01	Unit L	Analy Date/Time 01/23/2007 19:37	Act
9.II.80T10 B11.I6	J68		SAF Nb	r Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date:	
00200110 81200		MW6-SBB-A1	W07-012	W05087	7						12/28/2	2006 08:21	
Batch Analy	alyte CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7008361 TC-99	99 14133-7	5-7 1.74E+04	pCi/L	7.2E+01	1.2E+03		9.94E+	-00 100.0	TC99_ETVDSK_LS	1.252E-01	L	01/23/2007 19:37	' I
	lient Test Id: User	Contract Nbr	SAF Nb	r Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date:	
9JL81410 B1LK6	K68	MW6-SBB-A1	107-015	W05087	7						12/28/2	2006 08:39	
Batch Analy	alyte CAS#	Result		CntU 2S	TotU 2S	Qual		TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7008359 I-129L	9L 15046-8	4-1 9.59E-01	pCi/L	2.8E-01	2.8E-01	·U	4.99E-	01 90.0	I129LL_SEP_LEPS :	3.9021E+00	L	02/07/2007 14:55	5 1
	lient Test Id: User	Contract Nbr	SAF Nb	r Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date:	
9JL81D10 B1LJJ	JJ8	MW6-SBB-A1	W07-012	W05087	7						12/28/2	2006 11:04	
Batch Analy	•	Result	Unit	CntU 2S	TotU 2S	Qual	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7008361 TC-99	99 14133-7	6-7 1.06E+01	pCi/L	4.4E+00	6.5E+00		9.81E4	-00 100.0	TC99_ETVDSK_LS	1.268E-01	L	01/23/2007 19:37	7
	lient Test Id: User	Contract Nbr	SAF Nb	r Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date:	
9JL8W710 B1LJ7	J78	MW6-SBB-A1	W07-012	W05087	7						12/28/2	2006 11:33	
Batch Analy	•	Result	Unit	CntU 2S	TotU 2S	Qual	I MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7008361 TC-99	99 14133-7	6-7 8.88E+02	pCi/L	1.7E+01	6.6E+01		9.96E+	+00 100.0	TC99_ETVDSK_LS	1.25E-01	L	01/23/2007 19:37	7
Sample Id: Id	client Test Id: User	Contract Nbr	SAF Nb	Nbr:			Moisture/ Solids%*:	Distilled Volume	Sample On Date:			llection Date:	
9JL8XA10 B1LJ8		MW6-SBB-A1	W07-012	W05087	7 .						12/28/	2006 11:03	
Batch Analy 7008361 TC-99	•	Result 6.08E+03	Unit pCi/L	CntU 2S 4.2E+01	TotU 2S 4.2E+02	Qual		TrcYield +00 100.0	Method TC99_ETVDSK_LS	Alq Size 1.251E-01	Unit L	Analy Date/Time 01/23/2007 19:37	Act

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/12/2007 12:24:35 PM

STL Richland Report

Lab Code: STLRL

Rpt Nbr: 34468 File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd. h:\Reportdb\edd\FeadIV\Rad\34468.Edd FormatType: FEAD Version: 05 FormNbr: R SAF Nbr Sda QC Moisture/ Distilled Sample Collection Client Contract Lab Test Nbr: Type: Solids%*: Volume On Date: Date: ld: User Nbr Sample Id: 12/28/2006 09:37 W05087 9JL8XP10 B1LJJ3 MW6-SBB-A1 W07-012 Ala Size Analy Date/Time CAS# CntU 2S TotU 2S Qual MDA TrcYield Method Unit Act Batch Analyte Result Unit TC-99 1.94E+01 pCi/L 4.7E+00 7.1E+00 9.82F+00 100.0 TC99 ETVDSK LS 1.263E-01 01/23/2007 19:37 7008361 14133-76-7 Lab Client Test Contract SAF Nbr Sdq QC Moisture/ Distilled Sample Collection Nbr: Solids%*: Volume On Date: Date: Sample Id: ld: User Nbr Type: 12/28/2006 10:32 B1LJ98 MW6-SBB-A1 W07-012 W05087 9JL8XV10 Analy Date/Time CAS# CntU 2S TotU 2S Qual MDA TrcYield Method Ala Size Unit Act Result Unit Batch Analyte 4.1E+00 6.0E+00 U 9.80E+00 100.0 TC99 ETVDSK LS 1.267E-01 L 01/23/2007 19:37 7008361 TC-99 14133-76-7 2.65E+00 pCi/L Client SAF Nbr Sdq QC Moisture/ Distilled Sample Collection Lab Test Contract Nbr Nbr: Type: Solids%*: Volume On Date: Date: Sample Id: ld: User 01/02/2007 11:29 9JMEFC10 B1LF70 MW6-SBB-A1 W07-012 W05087 Analy Date/Time CntU 2S TotU 2S Qual MDA TrcYield Method Ala Size Unit Act Batch Analyte CAS# Result U 1.99E+00 100.0 9310 ALPHABETA 1.091E-01 L 01/30/2007 17:18 7008351 **ALPHA** 12587-46-1 6.36E-01 pCi/L 9.8E-01 9.9E-01 QC Distilled Collection Sda Moisture/ Sample Lab Client Test Contract SAF Nbr Nbr Nbr: Type: Solids%*: Volume On Date: Date: Sample Id: ld: User 01/02/2007 10:37 9JMEL710 B1LD92 MW6-SBB-A1 S07-012 W05087 CAS# CntU 2S TotU 2S Qual MDA TrcYield Method Ala Size Unit Analy Date/Time Act Batch Analyte Result Unit 1.8E+03 1.2E+04 2.93E+02 100.0 906.0 H3 LSC 5.00E-03 L 01/24/2007 15:34 7008350 H-3 10028-17-8 3.21E+05 pCi/L **ALPHA** 2.5E+00 2.9E+00 2.35E+00 100.0 9310 ALPHABETA 1.723E-01 L 01/30/2007 14:12 7008351 12587-46-1 6.18E+00 pCi/L 7008352 **BETA** 12587-47-2 6.03E+01 pCi/L 4.0E+00 8.7E+00 3.23E+00 100.0 9310 ALPHABETA 1.893E-01 L 01/30/2007 14:27 7008361 TC-99 14133-76-7 2.27E+02 pCi/L 9.1E+00 2.1E+01 9.86E+00 100.0 TC99 ETVDSK LS 1.259E-01 L 01/23/2007 19:37 7.79E-02 UTOT KPA 2.69E-02 02/06/2007 14:32 7008353 9.07E+00 1.1E+00 1.1E+00 ML Uranium 7440-61-1 ug/L Client Contract SAF Nbr Sdg QC Moisture/ Distilled Sample Collection Lab Test Sample Id: Nbr Nbr: Type: Solids%*: Volume On Date: Date: ld: User 9JMEME10 B1LDC2 MW6-SBB-A1 S07-012 W05087 01/02/2007 11:34

Batch

7008350

7008351

7008352

7008361

7008353

MDA

TrcYield

2.94E+02 100.0

1.96E+00 100.0

2.89E+00 100.0

9.94E+00 100.0

8.15E-02

Method

UTOT KPA

906.0 H3 LSC

9310 ALPHABETA 1.732E-01

9310 ALPHABETA 2.01E-01

TC99 ETVDSK LS 1.252E-01

Alq Size

5.00E-03

2.57E-02

Unit

L

L

L

MI

Analy Date/Time

01/24/2007 16:56

01/30/2007 14:12

01/30/2007 14:27

01/23/2007 19:37

02/06/2007 14:34

Qual

Act

Analyte

ALPHA

BETA

TC-99

Uranium

H-3

CAS#

10028-17-8

12587-46-1

12587-47-2

14133-76-7

7440-61-1

Result

4.90E+05

3.35E+00

2.51E+01

6.46E+01

8.38E+00

Unit

pCi/L

pCi/L

pCi/L

pCi/L

ug/L

CntU 2S

2.6E+00

TotU 2S

4.1E+00

2.2E+03 1.8E+04

1.9E+00 2.0E+00

6.0E+00 1.0E+01

1.0E+00 1.0E+00

STL Richland

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B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/12/2007 12:24:35 PM STL Richland Report Lab Code: STLRL

FormatType: FEAD Version: 05 Rpt Nbr: 34468 File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd FormNbr: R QC Distilled SAF Nbr Sda Moisture/ Sample Collection Lab Client Test Contract Sample Id: Nbr Nbr: Type: Solids%*: Volume On Date: Date: ld: User MW6-SBB-A1 S07-012 W05087 01/02/2007 12:36 9JMEMG10 B1LDB2 Method Analy Date/Time Analyte CAS# Result Unit CntU 2S TotU 2S Qual MDA TrcYield Alq Size Unit Act Batch 4.42E+04 pCi/L 6.8E+02 1.8E+03 2.94E+02 100.0 906.0 H3 LSC 5.00E-03 01/24/2007 18:18 | H-3 10028-17-8 7008350 **ALPHA** 2.68E+00 nCi/L 1.6E+00 1.7E+00 1.77E+00 100.0 9310 ALPHABETA 2.011E-01 01/30/2007 14:12 7008351 12587-46-1 7008352 **BETA** 12587-47-2 1.01E+01 pCi/L 1.9E+00 2.3E+00 2.79E+00 100.0 9310 ALPHABETA 2.005E-01 01/30/2007 14:27 QC Distilled Collection Lab Client Test Contract SAF Nbr Sda Moisture/ Sample User Nbr Nbr: Type: Solids%*: Volume On Date: Date: Sample Id: ld: 9JMEMH10 B1LDC7 W05087 01/02/2007 09:42 MW6-SBB-A1 S07-012 CAS# Result Unit CntU 2S TotU 2S Qual MDA TrcYield Method Ala Size Unit Analy Date/Time Act Batch Analyte 01/30/2007 14:12 | 2.5E+00 2.8E+00 2.21E+00 100.0 9310 ALPHABETA 1.729E-01 7008351 **ALPHA** 12587-46-1 6.15E+00 pCi/L 2.2E+00 3.2E+00 2.65E+00 100.0 9310 ALPHABETA 2.019E-01 L 01/30/2007 14:27 **BETA** 12587-47-2 1.72E+01 pCi/L 7008352 TC-99 14133-76-7 2.46E+01 pCi/L 4.9E+00 7.5E+00 9.89E+00 100.0 TC99 ETVDSK_LS 1.254E-01 01/23/2007 19:37 7008361 2.52E-02 7440-61-1 8.60E+00 ug/L 8.8E-01 8.8E-01 8.32E-02 UTOT KPA 02/06/2007 14:37 7008353 Uranium SAF Nbr Sdg QC Moisture/ Distilled Sample Collection Lab Client Test Contract Nbr: Solids%*: Volume On Date: Date: Sample Id: ld: User Nbr Type: 01/02/2007 10:30 9JMEQ510 B1LC42 MW6-SBB-A1 S07-012 W05087 Analy Date/Time Alq Size Batch Analyte CAS# Result CntU 2S TotU 2S Qual MDA TrcYield Method Unit Act 3.0E-01 3.0E-01 U 3.88E-01 92.2 1129LL SEP LEPS 3.9632E+00 02/07/2007 17:16 7008359 I-129L 15046-84-1 4.78E-01 pCi/L SAF Nbr Sdq QC Moisture/ Distilled Collection Lab Client Test Contract Sample Nbr: Solids%*: Volume On Date: Date: User Nbr Type: Sample Id: ld: 01/02/2007 09:17 W05087 9JMEQA10 B1LC39 MW6-SBB-A1 S07-012 CntU 2S TotU 2S Qual MDA **TrcYield** Method Alq Size Analy Date/Time Batch Analyte CAS# Result Unit Unit Act L 1.59E-01 1.6E-01 U 3.25E-01 83.5 1129LL_SEP_LEPS 3.9562E+00 02/07/2007 14:58 I-129L 15046-84-1 pCi/L 1.4E-01 7008359 QC Distilled Sample Collection Lab Client Test Contract SAF Nbr Sdq Moisture/ Nbr: On Date: Sample Id: ld: User Nbr Type: Solids%*: Volume Date: W05087 01/03/2007 10:15 9JMER910 B1LJW0 MW6-SBB-A1 G07-012 CAS# Result CntU 2S TotU 2S Qual MDA TrcYield Method Ala Size Unit Analy Date/Time Act Batch Analyte 10028-17-8 7008350 H-3 1.80E+04 pCi/L 4.4E+02 8.3E+02 2.93E+02 100.0 906.0 H3 LSC 5.00E-03 L 01/24/2007 19:40 **ALPHA** 12587-46-1 1.2E+00 1.2E+00 U 1.81E+00 100.0 9310 ALPHABETA 1.927E-01 01/30/2007 14:12 | 7008351 1.36E+00 pCi/L L 7008352 **BETA** 12587-47-2 3.32E+03 pCi/L 2.6E+01 7.0E+02 3.40E+00 100.0 9310_ALPHABETA 1.00E-01 01/30/2007 15:18 7008355 BE-7 13966-02-4 pCi/L 2.2E+01 2.2E+01 U 3.83E+01 GAMMALL GS 1.9522E+00 L 01/30/2007 11:10 -3.94E+00 7008355 CO-60 10198-40-0 2.35E+00 pCi/L 2.7E+00 2.7E+00 U 6.00E+00 GAMMALL GS 1.9522E+00 L 01/30/2007 11:10

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/12/200	7 12:24:35 P.	M	SI	STL Richland Report							Lab Code: STLRL			
FormNbr	: R	FormatType: FE	AD Versi	on: 05	Rpt N	br: 34468		File Name:	n:\Reportdb\e	edd\FeadIV\Rad\W050	87.Edd, h:\Rep	ortdb\ed	d\FeadIV\Rad\34468.Ed	dd
7008355	CS-134	13967-70-9	6.98E-01	pCi/L	2.4E+00	2.4E+00	U	4.76E+00)	GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	ı
7008355	CS-137	10045-97-3	-1.53E-01	pCi/L	2.0E+00	2.0E+00	U	3.71E+00)	GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	ı
7008355	EU-152	14683-23-9	-9.76E+00	pCi/L	5.9E+00	5.9E+00	U	8.43E+00)	GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	1
7008355	EU-154	15585-10-1	8.57E-01	pCi/L	7.4E+00	7.4E+00	U	1.47E+01		GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	1
7008355	EÚ-155	14391-16-3	-1.93E+00	pCi/L	6.1E+00	6.1E+00	U	1.01E+01		GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	ı
7008355	K-40	13966-00-2	3.18E+01	pCi/L	6.0E+01	6.0E+01	U	1.38E+02	2	GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	1
7008355	RU-106	13967-48-1	8.28E+00	pCi/L	1.8E+01	1.8E+01	U	3.55E+01		GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	ŀ
7008355	SB-125	14234-35-6	-2.46E+00	pCi/L	6.0E+00	6.0E+00	U	1.03E+01		GAMMALL_GS	1.9522E+00	L	01/30/2007 11:10	ļ
7008356	SR-90	10098-97-2	2.23E+03	pCi/L	1.5E+01	3.2E+02		9.72E-01	78.0	SRISO_SEP_PRE	1.007E+00	L	02/01/2007 05:34	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF NE	Nbr:	QC Typ		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			lection Date: 2007 12:22	
9JMERP10			/IW6-SBB-A1 Result	Unit		TotU 2S	Qual	MDA	TrcYield	Method	Alg Size	Unit	Analy Date/Time	Act
Batch 7008359	Analyte I-129L	CAS # 15046-84-1	7.70E-02	pCi/L	1.5E-01	1.5E-01	U	3.00E-01		I129LL_SEP_LEPS	•	L	02/07/2007 17:17	
7008353	Uranium	7440-61-1	2.62E+00	ug/L	2.7E-01	2.7E-01		8.03E-02		UTOT_KPA	2.61E-02	ML	02/06/2007 14:39	1
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF N	or Sdg Nbr:	QC Type		Moisture/ Solids%*:	Distilled Volume	Sample On Date:			lection Date:	
9JMERQ10			/W6-SBB-A1	A07-012		7.	· ·	Condo / C .	Volumo	On Date.			2007 13:16	
Batch	Analyte											0 ., 00, 2		
		CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
7008361	TC-99	CAS# 14133-76-7	Result 4.61E+01	Unit pCi/L	CntU 2S 5.5E+00	TotU 2S 8.9E+00	Qual	MDA 9.91E+00		Method TC99_ETVDSK_LS	•		Analy Date/Time 01/23/2007 19:37	
7008361 7008353	•					8.9E+00	Qual		100.0		•	Unit		I
7008353 Lab Sample Id:	TC-99 Uranium Client Id:	14133-76-7 7440-61-1 Test User	4.61E+01 1.75E+01 Contract Nbr	pCi/L ug/L SAF Na	5.5E+00 2.1E+00 or Sdg Nbr:	8.9E+00 2.1E+00 QC Typ	 ;	9.91E+00	100.0	TC99_ETVDSK_LS UTOT_KPA Sample	1.256E-01	Unit L ML Col	01/23/2007 19:37 02/06/2007 14:43 lection Date:	I
Lab Sample Id: 9JMETL10	TC-99 Uranium Client Id: B1LJX0	14133-76-7 7440-61-1 Test User	4.61E+01 1.75E+01 Contract Nbr //W6-SBB-A1	pCi/L ug/L SAF Nt G07-012	5.5E+00 2.1E+00 or Sdg Nbr:	8.9E+00 2.1E+00 QC Typ	; e:	9.91E+00 7.73E-02 Moisture/ Solids%*:	Distilled Volume	TC99_ETVDSK_LS UTOT_KPA Sample On Date:	1.256E-01 2.71E-02	Unit L ML Col 01/03/2	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04	l I
Lab Sample Id: 9JMETL10 Batch	TC-99 Uranium Client Id: B1LJX0 Analyte	14133-76-7 7440-61-1 Test User N	4.61E+01 1.75E+01 Contract Nbr /W6-SBB-A1 Result	pCi/L ug/L SAF Nt G07-012 Unit	5.5E+00 2.1E+00 or Sdg Nbr: W05087	8.9E+00 2.1E+00 QC Typ	 ;	9.91E+00 7.73E-02 Moisture/ Solids%*:	Distilled Volume	TC99_ETVDSK_LS UTOT_KPA Sample On Date:	1.256E-01	Unit L ML Col	01/23/2007 19:37 02/06/2007 14:43 lection Date:	l I
Lab Sample Id: 9JMETL10 Batch 7008350	TC-99 Uranium Client Id: B1LJX0 Analyte H-3	14133-76-7 7440-61-1 Test User N CAS# 10028-17-8	4.61E+01 1.75E+01 Contract Nbr /W6-SBB-A1 Result 1.80E+04	pCi/L ug/L SAF Nt G07-012	5.5E+00 2.1E+00 or Sdg Nbr: W05087 CntU 2S 4.5E+02	8.9E+00 2.1E+00 QC Typ 7 TotU 2S 8.3E+02	; e:	9.91E+00 7.73E-02 Moisture/ Solids%*:	Distilled Volume TrcYield 2 100.0	TC99_ETVDSK_LS UTOT_KPA Sample On Date:	1.256E-01 2.71E-02 Alq Size 5.00E-03	Unit L ML Col 01/03/2 Unit	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04 Analy Date/Time	l l Act
T008353 Lab Sample Id: 9JMETL10 Batch 7008350 7008351	TC-99 Uranium Client Id: B1LJX0 Analyte H-3 ALPHA	14133-76-7 7440-61-1 Test User CAS# 10028-17-8 12587-46-1	4.61E+01 1.75E+01 Contract Nbr //W6-SBB-A1 Result 1.80E+04 1.18E+00	pCi/L ug/L SAF Nt G07-012 Unit pCi/L	5.5E+00 2.1E+00 or Sdg Nbr: W05087 CntU 2S 4.5E+02	8.9E+00 2.1E+00 QC Typ	e: Qual	9.91E+00 7.73E-02 Moisture/ Solids%*: MDA 2.95E+02	Distilled Volume TrcYield 2 100.0 0 100.0	TC99_ETVDSK_LS UTOT_KPA Sample On Date: Method 906.0_H3_LSC	1.256E-01 2.71E-02 Alq Size 5.00E-03 1.92E-01	Unit L ML Col [01/03/2 Unit L	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04 Analy Date/Time 01/24/2007 22:23	Act
T008353 Lab Sample Id: 9JMETL10 Batch 7008350 7008351 7008352	TC-99 Uranium Client Id: B1LJX0 Analyte H-3 ALPHA BETA	14133-76-7 7440-61-1 Test User CAS# 10028-17-8 12587-46-1 12587-47-2	4.61E+01 1.75E+01 Contract Nbr //W6-SBB-A1 Result 1.80E+04 1.18E+00 2.46E+03	pCi/L ug/L SAF Nt G07-012 Unit pCi/L pCi/L	5.5E+00 2.1E+00 or Sdg Nbr: W05087 CntU 2S 4.5E+02 1.1E+00	8.9E+00 2.1E+00 QC Typ 7 TotU 2S 8.3E+02 1.1E+00 3.2E+02	e: Qual	9.91E+00 7.73E-02 Moisture/ Solids%*: MDA 2.95E+02	Distilled Volume TrcYield 2 100.0 0 100.0 0 100.0	TC99_ETVDSK_LS UTOT_KPA Sample On Date: Method 906.0_H3_LSC 9310_ALPHABETA	1.256E-01 2.71E-02 Alq Size 5.00E-03 1.92E-01	Unit L ML Col 01/03/2 Unit L	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04 Analy Date/Time 01/24/2007 22:23 01/30/2007 15:34	Act
T008353 Lab Sample Id: 9JMETL10 Batch 7008350 7008351 7008352 7008355	TC-99 Uranium Client Id: B1LJX0 Analyte H-3 ALPHA	14133-76-7 7440-61-1 Test User CAS# 10028-17-8 12587-46-1	4.61E+01 1.75E+01 Contract Nbr //W6-SBB-A1 Result 1.80E+04 1.18E+00	pCi/L ug/L SAF Nt G07-012 Unit pCi/L pCi/L pCi/L pCi/L	5.5E+00 2.1E+00 or Sdg Nbr: W05087 CntU 2S 4.5E+02 1.1E+00 2.3E+01 2.5E+01	8.9E+00 2.1E+00 QC Typ 7 TotU 2S 8.3E+02 1.1E+00 3.2E+02	e: Qual	9.91E+00 7.73E-02 Moisture/ Solids%*: MDA 2.95E+02 1.66E+00 2.79E+00	Distilled Volume TrcYield 2 100.0 0 100.0 0 100.0	TC99_ETVDSK_LS UTOT_KPA Sample On Date: Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS	1.256E-01 2.71E-02 Alq Size 5.00E-03 1.92E-01 2.01E-01	Unit L ML Col I 01/03/2 Unit L L L	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04 Analy Date/Time 01/24/2007 22:23 01/30/2007 15:34 01/30/2007 14:27	 Act
T008353 Lab Sample Id: 9JMETL10 Batch 7008350 7008351 7008352 7008355 7008355	TC-99 Uranium Client Id: B1LJX0 Analyte H-3 ALPHA BETA BE-7	14133-76-7 7440-61-1 Test User CAS# 10028-17-8 12587-46-1 12587-47-2 13966-02-4	4.61E+01 1.75E+01 Contract Nbr /W6-SBB-A1 Result 1.80E+04 1.18E+00 2.46E+03 1.90E+00 2.21E+00	pCi/L ug/L SAF Nk G07-012 Unit pCi/L pCi/L pCi/L	5.5E+00 2.1E+00 or Sdg Nbr: W05087 CntU 2S 4.5E+02 1.1E+00 2.3E+01 2.5E+01 3.1E+00	8.9E+00 2.1E+00 QC Typ 7 TotU 2S 8.3E+02 1.1E+00 3.2E+02 2.5E+01	Qual	9.91E+00 7.73E-02 Moisture/ Solids%*: MDA 2.95E+02 1.66E+00 2.79E+00 4.66E+0	Distilled Volume TrcYield 2 100.0 0 100.0 0 100.0 0 100.0	TC99_ETVDSK_LS UTOT_KPA Sample On Date: Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA	1.256E-01 2.71E-02 Alq Size 5.00E-03 1.92E-01 2.01E-01 2.0001E+00	Unit L ML Col 01/03/2 Unit L L L	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04 Analy Date/Time 01/24/2007 22:23 01/30/2007 15:34 01/30/2007 14:27 01/30/2007 11:11	
T008353 Lab Sample Id: 9JMETL10 Batch 7008350 7008351 7008352 7008355	TC-99 Uranium Client Id: B1LJX0 Analyte H-3 ALPHA BETA BE-7 CO-60	14133-76-7 7440-61-1 Test User CAS# 10028-17-8 12587-46-1 12587-47-2 13966-02-4 10198-40-0	4.61E+01 1.75E+01 Contract Nbr /W6-SBB-A1 Result 1.80E+04 1.18E+00 2.46E+03 1.90E+00	pCi/L ug/L SAF Nk G07-012 Unit pCi/L pCi/L pCi/L pCi/L pCi/L	5.5E+00 2.1E+00 Sdg Nbr: W05087 CntU 2S 4.5E+02 1.1E+00 2.3E+01 2.5E+01 3.1E+00 2.5E+00	8.9E+00 2.1E+00 QC Typ 7 TotU 2S 8.3E+02 1.1E+00 3.2E+02 2.5E+01 3.1E+00	Cual Qual U U U	9.91E+00 7.73E-02 Moisture/ Solids%*: MDA 2.95E+02 1.66E+00 2.79E+00 4.66E+01 6.36E+00	Distilled Volume TrcYield 2 100.0 0 100.0	TC99_ETVDSK_LS UTOT_KPA Sample On Date: Method 906.0_H3_LSC 9310_ALPHABETA 9310_ALPHABETA GAMMALL_GS GAMMALL_GS	1.256E-01 2.71E-02 Alq Size 5.00E-03 1.92E-01 2.01E-01 2.0001E+00 2.0001E+00	Unit L ML Col [01/03/2 Unit L L L L	01/23/2007 19:37 02/06/2007 14:43 lection Date: 2007 11:04 Analy Date/Time 01/24/2007 22:23 01/30/2007 15:34 01/30/2007 14:27 01/30/2007 11:11 01/30/2007 11:11	Act

STL Richland

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/12/200	V/12/2007 12:24:35 PM					STL Richland Report						Lab Code: STLRL			
FormNb	r: R	FormatType: FE	AD Versi c	on: 05	Rpt N	Rpt Nbr: 34468		File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportd				d\FeadIV\Rad\34468.Edd			
7008355	EU-154	15585-10-1	-1.00E+00	pCi/L	7.6E+00	7.6E+00	U	1.42E+01	GAMMALL_GS	2.0001E+00	L	01/30/2007 11:11 I			
7008355	EU-155	14391-16-3	-1.74E+00	pCi/L	4.7E+00	4.7E+00	U	8.03E+00	GAMMALL_GS	2.0001E+00	L	01/30/2007 11:11 I			
7008355	K-40	13966-00-2	-5.36E+01	pCi/L	4.8E+01	4.8E+01	U	9.95E+01	GAMMALL_GS	2.0001E+00	L	01/30/2007 11:11 I			
7008355	RU-106	13967-48-1	-3.66E-01	pCi/L	2.3E+01	2.3E+01	U	4.21E+01	GAMMALL_GS	2.0001E+00	L	01/30/2007 11:11 I			
7008355	SB-125	14234-35-6	2.46E-01	pCi/L	5.3E+00	5.3E+00	U	9.61E+00	GAMMALL_GS	2.0001E+00	L	01/30/2007 11:11 I			
7008356	SR-90	10098-97-2	1.39E+03	pCi/L	8.3E+00	2.0E+02		6.97E-01 78.3	SRISO_SEP_PRE	1.0049E+00	L	02/01/2007 06:36 I			

rptFeadRadSummaryEdd v3.48

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

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Lab Sample Id:

JMJM01AB

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 11:04

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: **BLK**

Received Date: 01/03/2007

SAF Nbr

Contract Nbr MW6-SBB-A19981 **Test User** Case Nbr SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp BE Н

Batch # / Qc Type

7008351

BLK

Analyt/ CAS# ALPHA

12587-46-1

Result/ **Orig Rst** 2.10E-02

Tot/Cnt Unit **Uncert 2S** pCi/L 2.0E-01

2.0E-01

Qu-MDC al U 5.35E-01

Tracer Yield 100.0

Spk Conc/ %Rec

Analy Method 9310_ALPHAB

Aliq Size/ 2.014E-01

Date/Time Analyzed 01/30/2007

RPD/ RER/ UCL UCL

LCS LCL/UCL Typ

R

D

17:18

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

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Lab Sample Id:

JMJM21AB

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/02/2007 12:36

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

01/02/2007

Moisture/Solids%*:

QC Type:

BLK

Received Date:

SAF Nbr

Batch # /

Qc Type

Contract Nbr MW6-SBB-A19981 Test User

Case Nbr SAS Nbr Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp BG

Н

D

R

Analyt/ CAS#

Result/ Orig Rst 1.28E+00

Tot/Cnt Unit Uncert 2S pCi/L 9.4E-01

Qual U

Tracer MDC Yield 1.75E+00 100.0

Spk Conc/ %Rec

Analy Method 9310 ALPHAB

Aliq Size/ 2.009E-01

Date/Time Analyzed 01/30/2007 RPD/ RER/ UCL UCL

LCS LCL/UCL Typ

7008352 BETA BLK 12587-47-2

9.3E-01

15:18

STL Richland rptFeadRadEdd v3.68

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

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Lab Sample Id:

JMJM31AB

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 12:22

Client Id:

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Matrix:

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BLK

WATER

01/03/2007 Received Date:

SAF Nbr

Contract Nbr

Test User Case Nbr SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RTyp ВΙ Н

MW6-SBB-A19981

Tot/Cnt

Qu-MDC al

Tracer Spk Conc/ Yield

Analy Method

Aliq Size/ Date/Time Analyzed

RPD/ RER/ UCL UCL

LCS

R

Qc Type 7008353

Batch # /

Analyt/ CAS# Uranium

Result/ Orig Rst 0.00E+00

Unit **Uncert 2S** ug/L 0.0E+00

U 2.10E-01

%Rec

UTOT_KPA

2.52E-02

02/06/2007

LCL/UCL Typ D

BLK 7440-61-1

0.0E+00

ML

14:24

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM51AB

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

NA

Matrix:

WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BLK

Received Date: 01/03/2007

						/ [
SAF		ontract Nbr '6-SBB-A19981	Т	est User	Case	Nbr S	AS Nbr	Suffix	Decant [Distilled Volume	File	e Id		FSuffix I BL	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Ty
7008355	BE-7	5.24E-01	pCi/L	2.3E+01	U	4.22E+0	1		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	13966-02-4			2.3E+01						L	11:11				
7008355	CO-60	-5.22E-01	pCi/L	1.9E+00	U	3.62E+00)		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	10198-40-0			1.9E+00						L	11:11				
7008355	CS-134	~1.49E+00	pCi/L	2.1E+00	U	3.52E+00)		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	13967-70-9			2.1E+00						L	11:11				
7008355	CS-137	-7.66E-01	pCi/L	2.1E+00	U	3.76E+00)		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	10045-97-3			2.1E+00						L	11:11				
7008355	EU-152	1.94E+00	pCi/L	5.1E+00	U	9.66E+0)		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	14683-23-9			5.1E+00						L	11:11				
7008355	EU-154	5.11E+00	pCi/L	6.2E+00	U	1.43E+0	1		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	15585-10-1			6.2E+00						L	11:11				
7008355	EU-155	1.10E+00	pCi/L	4.4E+00	U	8.00E+0	כ		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	14391-16-3			4.4E+00						L	11:11				
7008355	K-40	-1.61E+01	pCi/L	4.4E+01	U	9.67E+0	1		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	13966-00-2			4.4E+01						L	11:11				
7008355	RU-106	2.67E+00	pCi/L	2.0E+01	U	3.83E+0	1		GAMMALL_GS	2.00E+00	01/30/2007				D
BLK	13967-48-1			2.0E+01						L	11:11				
7008355	SB-125	-2.13E+00	pCi/L	5.7E+00	U	9.96E+0)		GAMMALL_GS	3 2.00E+00	01/30/2007				D
BLK	14234-35-6			5.7E+00						L	11:11				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM61AB

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date: Received Date:

01/03/2007

SAF Nbr

Contract Nbr

Case Nbr

Qu-

al

BLK

Tracer

Suffix

Decant

FSuffix RTyp

MW6-SBB-A19981

Test User

SAS Nbr

QC Type:

Distilled Volume

File Id

BN Н

Batch # / Qc Type 7008356

BLK

Analyt/ CAS# SR-90

Result/ **Orig Rst** 3.83E-01

pCi/L 3.1E-01

Tot/Cnt **Uncert 2S** 3.0E-01

MDC Yield 5.83E-01 70.0

%Rec

Spk Conc/ Analy Method

Aliq SRISO SEP P 9.999E-01

Size/

Date/Time Analyzed 02/01/2007

RPD/ RER/ UCL

LCS LCL/UCL Typ

UCL

D

10098-97-2

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

Moisture/Solids%*:

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\V34468.Edd

Lab Sample Id:

JMJM71AB

Sdg/Rept Nbr: W05087

QC Type:

34468

Collection Date: 12/28/2006 08:39

Client Id:

NA

Matrix:

WATER

Tracer

WATER

Sample On Date:

Received Date:

12/28/2006

SAF Nbr

Contract Nbr

BLK

FSuffix RTyp

MW6-SBB-A19981

Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

Aliq

File Id

BP Н

Batch # / Qc Type

BLK

Analyt/ CAS# 7008359 I-129L

15046-84-1

Result/ Orig Rst -3.96E-03

Tot/Cnt Unit Uncert 2S pCi/L 1.2E-01 1.2E-01

Test User

Qual

MDC Yield 2.21E-01 90.3

Spk Conc/ %Rec

Analy Method I129LL_SEP_L

Size/ 3.884E+00

Analyzed 02/07/2007

Date/Time

RPD/ RER/ UCL UCL

LCS R LCL/UCL Typ

L 17:18 D

STL Richland QC Blank Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM81AB

Sdg/Rept Nbr: W05087

34468

Collection Date: 12/28/2006 11:33

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type: **BLK**

Received Date:

12/28/2006

SAF Nbr

7008361

BLK

Contract Nbr MW6-SBB-A19981 **Test User** Case Nbr SAS Nbr

Suffix

Distilled Volume Decant

File Id

FSuffix RTyp BR

Analyt/ Batch # / Qc Type CAS#

Result/ Orig Rst -2.14E+00

Tot/Cnt Unit Uncert 2S pCi/L 3.5E+00

Qual

Tracer MDC Yield 6.17E+00 100.0

Spk Conc/ %Rec

Analy Aliq Method TC99 ETVDSK 2.013E-01

Size/

Date/Time RPD/ Analyzed 01/23/2007

RER/ UCL

LCS

Н

R

LCL/UCL Typ UCL D

19:37

TC-99

14133-76-7

Monday, February 12, 2007 STL Richland QC Blank Report Lab Code: STLRL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\W05087.Edd, h:\Reportd

Lab Sample Id: JMJMX1AB **Sdg/Rept Nbr:** W05087 34468 **Collection Date:** 01/03/2007 10:15

Client Id: NA Matrix: WATER WATER Sample On Date:

Moisture/Solids%*: QC Type: BLK Received Date: 01/03/2007

SAF Nbr Contract Nbr Test User Case Nbr SAS Nbr Suffix Decant Distilled Volume File Id FSuffix RTyp

MW6-SBB-A19981

BT H

Batch # / Result/ Tot/Cnt Qu-Tracer Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS R Analyt/ %Rec LCL/UCL Typ CAS# Uncert 2S MDC Yield Method Size/ UCL UCL Qc Type Orig Rst Unit al Analyzed D 7008350 H-3 9.52E+01 pCi/L 1.4E+02 2.94E+02 100.0 01/24/2007

L

10:07

1.2E+02

10028-17-8

BLK

STL Richland QC Blank Report Monday, February 12, 2007

FormNbr: R FormatType: FEAD VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

Moisture/Solids%*:

JMJMX1DX

Sdg/Rept Nbr: W05087

QC Type:

34468

Collection Date: 01/03/2007 10:15

Lab Code: STLRL

Client Id:

NA

Matrix:

WATER

BLK

WATER

Sample On Date:

Received Date:

01/03/2007

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BV	Н

Batch # / Result/ Tot/Cnt Tracer Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS Analyt/ Qu-MDC Yield %Rec Method Size/ UCL UCL LCL/UCL Typ CAS# **Orig Rst** Unit Uncert 2S al Analyzed Qc Type D 7008350 H-3 8.16E+01 pCi/L 1.4E+02 3.01E+02 100.0 906.0 H3 LSC 5.00E-03 01/24/2007

BLK 10028-17-8 1.3E+02

12:51

L

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM01CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 11:04

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

01/03/2007

SAF		ntract Nbr S-SBB-A19981		est User	Case	Nbr :	SAS Nbr	Suffix	Decant I	Distilled Volume	File	e ld		FSuffix I BF	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
7008351 BS	ALPHA 12587-46-1	1.88E+01	pCi/L	4.8E+00 2.0E+00		6.75E-0	1 100.0	2.23E+01 84.1	9310_ALPHAE	2.02E-01 L	01/30/2007 17:18			70 130	D

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

Test User

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Distilled Volume

Lab Sample Id:

JMJM21CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/02/2007 12:36

Client Id:

SAF Nbr

NA

Matrix:

WATER

WATER

Sample On Date:

01/02/2007

File Id

Moisture/Solids%*:

Contract Nbr

QC Type: Case Nbr SAS Nbr

BS

Suffix Decant **Received Date:**

FSuffix RTyp

	MW6	S-SBB-A19981												ВН	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
7008352	BETA	2.16E+01	pCi/L	3.8E+00		1.82E+00	100.0	2.22E+01	9310_ALPHAB	2.025E-01	01/30/2007			70	D
BS	12587-47-2			1.7E+00				97.2		1	15:18			130	

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM31CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 12:22

Client Id:

NA

Matrix:

WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date: 01/03/2007

SAF		contract Nbr V6-SBB-A19981	Т	est User	Case	Nbr S	SAS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix R BJ	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
7008353	Uranium	3.40E+01	ug/L	4.0E+00		8.12E-02)	3.51E+01	UTOT_KPA	2.58E-02	02/06/2007			70	D
BS	7440-61-1		_	4.0E+00				96.9		ML	14:28			130	

rptFeadRadEdd v3.68

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM31DS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 12:22

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

01/03/2007

SAFI		Contract Nbr W6-SBB-A19981	T	est User	Case	Nbr :	SAS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix F BK	RTyp H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R CL Typ
7008353	Uranium	3.52E+00	ug/L	3.6E-01		8.22E-0	2	3.56E+00	UTOT_KPA	2.55E-02	02/06/2007			70	D
BS	7440-61-1		_	3.6E-01				98.9		ML	14:30			130	

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM51CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

01/03/2007

		Contract Nbr V6-SBB-A19981		Test User	Case	Nbr S/	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R BM	RТур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
7008355 BS	CO-60 10198-40-0	3.59E+01	pCi/L	8.3E+00 8.3E+00		4.45E+00		3.84E+01 93.4	GAMMALL_G	S 2.00E+00 L	01/30/2007 11:11			70 130	D
7008355 BS	CS-137 10045-97-3	2.69E+01	pCi/L	6.6E+00 6.6E+00		4.19E+00		2.47E+01 109.1	GAMMALL_G	S 2.00E+00 L	01/30/2007 11:11			70 130	D
7008355 BS	EU-152 14683-23-9	7.53E+01	pCi/L	1.8E+01 1.8E+01		1.05E+01		7.72E+01 97.5	GAMMALL_G	S 2.00E+00 L	01/30/2007 11:11			70 130	D

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM61CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

01/03/2007

SAF Nbr

Contract Nbr MW6-SBB-A19981 Case Nbr

SAS Nbr

Decant

Distilled Volume

File Id

FSuffix RTyp BO Н

Analyt/

Result/ **Orig Rst**

Tot/Cnt Uncert 2S

Test User

Qu-

Tracer MDC Yield 5.68E-01

Spk Conc/ %Rec 1.36E+01

Analy Method SRISO SEP P Aliq Size/

Date/Time RPD/ UCL Analyzed

RER/ UCL

LCS LCL/UCL Typ

R

D

CAS# Qc Type 7008356 SR-90 BS

Batch # /

10098-97-2

1.48E+01

pCi/L 2.3E+00 8.8E-01

69.7

108.9

Suffix

1.0002E+00 02/01/2007 05:59

70 130

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM71CS

8.94E+00

Sdg/Rept Nbr: W05087

34468

Collection Date: 12/28/2006 08:39

Client Id:

NA

Matrix:

WATER WATER Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

12/28/2006

SAF NE	or Co	ontract Nbr	Т	est User	Case N	lbr S	SAS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix F	Тур
	MW	6-SBB-A19981												BQ	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ

pCi/L 1.2E+00

4.38E-01 79.0

9.59E+00

I129LL_SEP L 4.001E+00 02/07/2007

70 D

15046-84-1 BS

7008359 I-129L

1.2E+00

93.3

19:02

130

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

16

STL Richland

STL Richland QC Control Sample Report

Lab Code: STLRL

130

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJM81CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 12/28/2006 11:33

Client Id:

BS

NA

Matrix:

8.0E+00

WATER

WATER

Sample On Date:

19:37

Moisture/Solids%*:

14133-76-7

QC Type:

BS

Received Date:

12/28/2006

SAF	Nbr	Contract Nbr	Т	est User	Case	Nbr SA	S Nbr	Suffix	Decant D	istilled Volume	: File	e Id		FSuffix R	Тур
	V	MW6-SBB-A19981												BS	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R . Typ
7008361	TC-99	3.10E+02	pCi/L	2.5E+01		6.21E+00	100.0	3.40E+02	TC99_ETVDSK	1.999E-01	01/23/2007			70	D

91.3

STL Richland QC Control Sample Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJMX1CS

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

NA

Matrix:

QC Type:

WATER WATER

Sample On Date: Received Date:

01/03/2007

RPD/

UCL

Moisture/Solids%*:

10028-17-8

Contract Nbr

Test User Case Nbr BS

Decant

Distilled Volume

SAF Nbr

MW6-SBB-A19981

SAS Nbr

Suffix

File Id

FSuffix RTyp

Batch # /

Qc Type

BS

Analyt/ CAS# 7008350 H-3

Result/ Orig Rst 2.60E+03

Tot/Cnt Unit Uncert 2S pCi/L 2.5E+02 2.0E+02

Qual

Tracer MDC Yield 2.94E+02 100.0

Spk Conc/ %Rec 2.72E+03

95.6

Analy Method 906.0 H3 LSC 5.00E-03

Aliq Size/

L

Date/Time Analyzed 01/24/2007

11:29

RER/ UCL

LCS LCL/UCL Typ

ΒU

Н

70 D 130

STL Richland rptFeadRadEdd v3.68 Monday, February 12, 2007 STL Richland QC Control Sample Report

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMJMX1EM

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Lab Code: STLRL

Client Id:

NA

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

BS

Received Date:

01/03/2007

SAFI		ntract Nbr -SBB-A19981	Т	est User	Case	Nbr S/	AS Nbr	Suffix	Decant [Distilled Volume	File	ld		FSuffix F BW	₹Тур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UC	R L Typ
7008350 BS	H-3 10028-17-8	2.69E+03	pCi/L	2.5E+02 2.1E+02		3.01E+02	100.0	2.72E+03 99.0	906.0_H3_LSC	5.00E-03 L	01/24/2007 14:13			70 130	D

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

2.6E-01

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

L

Lab Sample Id:

JL8141CR

Sdg/Rept Nbr: W05087

34468

Collection Date: 12/28/2006 08:39

14:57

Client Id:

DUP

B1LK68

9.59E-01

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

15046-84-1

QC Type:

DUP

Received Date:

12/28/2006

20.0

3

I07-015 MW6-SBB-A19981		
107-015 1019-019-019-01	AU H	
Batch # / Analyt/ Result/ Tot/Cnt Qu- Tracer Spk Conc/ Analy Aliq Date/Time Qc Type CAS# Orig Rst Unit Uncert 2S al MDC Yield %Rec Method Size/ Analyzed	RER/ LCS R UCL LCL/UCL TV	-
7008359 I-129L 9.45E-01 pCi/L 2.6E-01 U 5.22E-01 87.6 I129LL SEP L 3.9034E+00 02/07/2007	0.1	٢

Lab Code: STLRL STL Richland QC Duplicate Report Monday, February 12, 2007 File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd VersionNbr: 05 FormNbr: R FormatType: FEAD

Sdg/Rept Nbr: W05087 34468 Collection Date: 12/28/2006 11:33 JL8W71CR Lab Sample Id: WATER

12/28/2006 Moisture/Solids%*: QC Type: **DUP** Received Date:

Matrix:

SAF Nbr Contract Nbr Test User Case Nbr SAS Nbr Suffix Decant Distilled Volume File Id FSuffix RTyp

WATER

Sample On Date:

W07-012 MW6-SBB-A19981 ΑV Н Result/ Tot/Cnt Tracer Spk Conc/ Analy Aliq Date/Time RPD/ RER/ LCS Batch # / Analyt/ Qu-%Rec UCL LCL/UCL Typ MDC Yield Method Size/ Analyzed UCL CAS# Orig Rst Unit Uncert 2S Qc Type TC99 ETVDSK 1.252E-01 0.4 D 9.90E+00 100.0 01/23/2007 1.8 7008361 TC-99 8.72E+02 pCi/L 6.5E+01 3 8.88E+02 1.6E+01 L 19:37 20.0 DUP 14133-76-7

Client Id:

B1LJ78

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

1.9E+00

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMEMG1ER

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/02/2007 12:36

Client Id:

DUP

B1LDB2

1.01E+01

Matrix:

WATER WATER

Sample On Date:

14:27

Moisture/Solids%*:

12587-47-2

QC Type:

DUP

Received Date:

L

ate: 01/02/2007

20.0

3

SAF 1 S07-0		ntract Nbr 6-SBB-A19981	Т	est User	Case	Nbr SA	S Nbr	Suffix	Decant [Distilled Volume	File	e Id		FSuffix RT AX	ур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7008352	BETA	1.19E+01	pCi/L	2.5E+00		2.50E+00	100.0		9310_ALPHAB	2.012E-01	01/30/2007	16.4	1.		D

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

4.5E+02

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMER91GR

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

21:02

Client Id:

DUP

B1LJW0

1.80E+04

Matrix:

WATER WA

WATER

Sample On Date:

Moisture/Solids%*:

10028-17-8

QC Type:

DUP

Received Date:

: 01/03/2007

20.0

3

SAF	Nbr C	Contract Nbr	T	est User	Case	Nbr SA	\S Nbr	Suffix	Decant D	istilled Volume	File	e ld		FSuffix RT	ур
G07-0	12 MW	V6-SBB-A19981												AY I	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Tvp
		J		Officer 20	uı	WIDO	ricia	/01 1CC	Metriod	3126/	Allalyzeu	OCL	OCL	LCL/UCL	ιyp
7008350	H-3	1.84E+04	pCi/L	8.5E+02		2.95E+02	100.0		906.0 H3 LSC	5.00E-03	01/24/2007	2.2	0.7	Г)

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\VAad\34468.Edd

Lab Sample Id:

JMER91HR

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

B1LJW0

Matrix:

WATER WATER Sample On Date:

Moisture/Solids%*:

QC Type:

DUP

Received Date: 01/03/2007

SAF Nbr Contract Nbr **Test User** Case Nbr SAS Nbr Suffix Decant **Distilled Volume** File Id FSuffix RTyp G07-012 MMG-SRR-A10081 Δ7

G07-0	12 MW6-	SBB-A19981												AZ	H
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
7008355	BE-7	1.53E+01	pCi/L	2.6E+01	U	4.96E+01			GAMMALL_GS	1.9552E+00	01/30/2007	339.3	1.		D
DUP	13966-02-4	-3.94E+00		2.6E+01						L	11:10	20.0	3		
7008355	CO-60	8.14E-01	pCi/L	2.7E+00	U	5.49E+00			GAMMALL_GS	1.9552E+00	01/30/2007	96.9	8.0		D
DUP	10198-40-0	2.35E+00		2.7E+00						L	11:10	20.0	3		
7008355	CS-134	-7.69E-01	pCi/L	2.7E+00	U	4.85E+00			GAMMALL_GS	1.9552E+00	01/30/2007	0.0	8.0	İ	D
DUP	13967-70-9	6.98E-01		2.7E+00						L	11:10	20.0	3		
7008355	CS-137	2.13E-01	pCi/L	2.4E+00	U	4.49E+00			GAMMALL_GS	1.9552E+00	01/30/2007	1231.6	0.2		D
DUP	10045-97-3	-1.53E-01		2.4E+00						L	11:10	20.0	3		
7008355	EU-152	2.90E+00	pCi/L	5.6E+00	U	1.07E+01			GAMMALL_GS	1.9552E+00	01/30/2007	0.0	3.2		D
DUP	14683-23-9	-9.76E+00		5.6E+00						L	11:10	20.0	3		
7008355	EU-154	-8.77E-01	pCi/L	3.7E+00	U	7.59E+00			GAMMALL_GS	1.9552E+00	01/30/2007	0.0	0.7		D
DUP	15585-10-1	8.57E-01		3.7E+00						L	11:10	20.0	3		
7008355	EU-155	-1.46E-01	pCi/L	5.5E+00	U	9.47E+00			GAMMALL_GS	1.9552E+00	01/30/2007	0.0	0.5		D
DUP	14391-16-3	-1.93E+00		5.5E+00						L	11:10	20.0	3		
7008355	K-40	1.15E+00	pCi/L	4.8E+01	U	5.10E+01			GAMMALL_GS	1.9552E+00	01/30/2007	186.1	0.9		D
DUP	13966-00-2	3.18E+01		4.8E+01						L	11:10	20.0	3		
7008355	RU-106	-2.11E+01	pCi/L	2.1E+01	U	3.19E+01			GAMMALL_GS	1.9552E+00	01/30/2007	0.0	2.		D
DUP	13967-48-1	8.28E+00		2.1E+01						L	11:10	20.0	3		
7008355	SB-125	-4.47E-01	pCi/L	6.6E+00	U	1.17E+01			GAMMALL_GS	1.9552E+00	01/30/2007	0.0	0.4		D
DUP	14234-35-6	-2.46E+00		6.6E+00						L	11:10	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\VW05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMER91JR

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 10:15

Client Id:

B1LJW0

Matrix:

WATER WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

DUP

Received Date:

01/03/2007

SAF Nbr G07-012

Contract Nbr MW6-SBB-A19981 Case Nbr

Suffix Decant Distilled Volume

File Id

BA Н

R

D

FSuffix RTyp

Batch # / Qc Type 7008356

DUP

Analyt/ CAS# SR-90 10098-97-2

Result/ Orig Rst 2.05E+03 2.23E+03

Tot/Cnt Unit Uncert 2S pCi/L 2.9E+02 1.4E+01

Test User

Qual

Tracer MDC Yield 8.89E-01 82.9

SAS Nbr

Spk Conc/ %Rec

Analy Method SRISO SEP P

Date/Time Aliq Size/ Analyzed 1.0058E+00 02/01/2007

RPD/ UCL 8.3

RER/ LCS UCL LCL/UCL Typ 0.9

05:34 20.0 3 L

Lab Code: STLRL Monday, February 12, 2007 STL Richland QC Duplicate Report

VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd FormNbr: R FormatType: FEAD

WATER

Sdg/Rept Nbr: W05087 Lab Sample Id: JMERP1DR 34468 **Collection Date:** 01/03/2007 12:22 WATER

Sample On Date:

Moisture/Solids%*: QC Type: DUP **Received Date:** 01/03/2007

Matrix:

SAF I A07-0		ontract Nbr /6-SBB-A19981	Т	est User	Case	Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File	e ld		FSuffix R BB	Тур Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R . Typ
7008353 DUP	Uranium 7440-61-1	2.60E+00 2.62E+00	ug/L	2.7E-01 2.7E-01		8.38E-0	2		UTOT_KPA	2.50E-02 ML	02/06/2007 14:41	.5 20.0	0.1 3		D

B1LJR9

Client Id:

STL Richland QC Duplicate Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JMETL1GR

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 11:04

Client Id:

B1LJX0

Matrix:

WATER

WATER

Sample On Date:

Moisture/Solids%*:

QC Type:

DUP

Received Date:

01/03/2007

Case Nbr SAS Nbr Suffix Decant **Distilled Volume** File Id FSuffix RTyp Contract Nbr **Test User** SAF Nbr MW6-SBB-A19981 BD Н G07-012

RPD/ RER/ LCS R Spk Conc/ Analy Aliq Date/Time Batch # / Analyt/ Result/ Tot/Cnt Qu-Tracer MDC Yield %Rec Method Size/ Analyzed UCL UCL LCL/UCL Typ Qc Type CAS# Orig Rst Unit Uncert 2S al pCi/L 1.0E+00 1.73E+00 100.0 9310 ALPHAB 1.938E-01 01/30/2007 32.8 0.5 D 7008351 ALPHA 8.50E-01 U 9.8E-01 15:34 20.0 3 DUP 12587-46-1 1.18E+00 L

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

Test User

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

Lab Sample Id:

JL8XA1CW

Sdg/Rept Nbr: W05087

34468

Decant

Collection Date: 12/28/2006 11:03

Client Id:

SAF Nbr

B1LJ83

Contract Nbr

Matrix:

Case Nbr

WATER **WATER**

Suffix

Received Date:

Sample On Date:

12/28/2006

File Id

Moisture/Solids%*:

QC Type:

MS

SAS Nbr

Distilled Volume

FSuffix RTyp

W07-0)12 MW6	S-SBB-A19981												AW	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCI	R - Typ
7008361 MS	TC-99 14133-76-7	3.43E+03	pCi/L	7.7E+02 5.3E+01		9.77E+00	100.0	3.56E+03 96.3	TC99_ETVDSK	1.269E-01 L	01/23/2007 19:37			60 140	D

STL Richland Qc Matrix Spike Report

Lab Code: STLRL

FormNbr: R

FormatType: FEAD

6.4E+00

VersionNbr: 05

File Name: h:\Reportdb\edd\FeadIV\Rad\W05087.Edd, h:\Reportdb\edd\FeadIV\Rad\34468.Edd

ML

Lab Sample Id:

JMERQ1DW

Sdg/Rept Nbr: W05087

34468

Collection Date: 01/03/2007 13:16

140

Client Id:

MS

B1LJT1

Matrix:

WATER

WATER

Sample On Date:

14:45

Moisture/Solids%*:

7440-61-1

QC Type:

MS

Received Date:

01/03/2007

SAF	Nbr C	ontract Nbr	7	est User	Case	Nbr SA	AS Nbr	Suffix	Decant	Distilled Volume	File	e Id		FSuffix R	Тур
A07-0	12 MW	/6-SBB-A19981												BC	Н
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCI	R L Typ
7008353	Uranium	3 39F+01	ua/l	6.4E+00		7.94F-02		3.43E+01	UTOT KPA	2.64E-02	02/06/2007			60	D

98.8



Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/31/2007 8:52:02 AM

Lot No., Due Date:

J7A040186,J7A040214,J7A040243; 02/16/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7008351; RALPHA-A Alpha by GPC-Am

SDG, Matrix:

W05087; WATER

SDG, Matrix:	W05087; WATER			
8.0 Correction Calculati OK		Yea	No	N/A
8.01 The Appropriate M OK	lethods Were Used To Analyze the Samples	Yes	No	N/A
8.02 Final Results Are i	n the Appropriate Activity Units	Yes	No	N/A
8.03 Batch Contains the OK	e Required QC Appropriate for the Method	Yes	No	N/A
8.04 The Correct Tracel	r and QC Vials Where Used in the Samples	Yes	No	N/A
8.05 Sample was Appro	opriately Traced Before or After Fractionating the Sample	Yes	No	N/A
8.06 At Least the Minim	<200.00	Yes	No	N/A
8.07 The Correct Count OK		Yes	No	N/A
8.08 The Sample was C	Counted for the Minimum Count Time or CRDL was Achieved.	Yes	No	N/A
8.09 Method Blank is wi OK	ithin Control Limits.	Yes	No	N/A
8.1 Comments:				
8.11 Matrix Blank is with No Matrix Blanks (MB		Yes	No	N/A
English and the second of the	QAS Limit Value (No B Flag Necessary).	Yes	No	N/A
8.13 QAS Specified Dup	plicate Equation Value within Control Limits. JMETL1AG ALPHA 33.0 (RPD)	Yes	No	N/A
8.14 LCS within Control		Yes	No	N/A
8.15 MLCS within Contr		Yes	No	N/A
8.16 MS within Control		Yes	No	N/A
8.17 Tracer within Control OK		Yes	No	N/A
	e Minimum Tracer Yield (No Failed Samples)	Yes	No	N/A
8.19 Sample Specific M	IDC <= CRDL.	Yes	No	N/A
8.2 Comments:				eteromore about them are t
8.21 Result < Lc, Activit No Limit Specified!	ty Not Detected, U Flag.	Yes	No	NA
	.2E+00 L:2.3E+00 x 3.3E+00 L:2.0E+00 x 2.7E+00 L:1.8E+00	Yes	No	N/A
8.23 Result <= Action L OK; No Action Level	evel, when Defined.	Yes	No	N/A
OK; No Callin Level	Found => ALPHA	S. T. C. S.	non orașo a la responsaci	SST ANNO SANGTON AND SANGTON A
STL Richland		Page	1	
QAS_RADCALCv4.8.26				

8.24 Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A
8.25 Counting Spectrum are within FWHM Limits.	Yes	NIA	NI/A
No FWHM found in Batch Data!	Tes	NO	N/A
8.26 Instruments have Current Calibrations.	Yes	No	N/A
8.27 Correct Count Library Used.	Yes	No	N/A
No Count Library found in Batch Data!			W
8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be deve	loped in later version ses	No	N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be	e developed in later v ess io	nNeo).	N/A
8.3 Comments:		trenenga a cantilite e e e e e e e e e e e e e e e e e e	ANTINI MENINDENINA
8.31 Results Blank Subtracted as Appropriate. OK	Yes	No	N/A
		dèses contes como	more of Parents of Security

First Level Review _ STL Richland

QAS_RADCALCv4.8.26

Pam Anderson



Data Review Checklist RADIOCHEMISTRY Second Level Review

	Yes (V)	No (1)	N/A (√)
A. Sample Analysis		1.00	1011(1)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract		 	
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 			
Contract Detection Limit?			
. Does the blank result meet the Contract criteria?			
. Is the blank result < the Contract Detection Limit?	1		
, Is the blank result > the Contract Detection Limit but the sample			
esult < the Contract Detection Limit?			
. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
imit?			
. Do the MS/MSD results and yields meet acceptance criteria?			
Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
. Was the correct methodology used?			
4. Was transcription checked?			
. Were all calculations checked at a minimum frequency? . Were units checked?	1 / /		

LS-038B, Rev. 10, 8/02



Data Review/Verification Checklist

1/31/2007 8:53:29 AM

RADIOCHEMISTRY, First Level Review Lot No., Due Date: J7A040214,J7A040243; 02/16/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 7008352; RBETA-SR Beta by GPC-Sr/Y SDG, Matrix: W05087; WATER 8.0 Correction Calculation Protocol Used. Yeş No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yes No N/A 8.02 Final Results Are in the Appropriate Activity Units Yes No N/A 8.03 Batch Contains the Required QC Appropriate for the Method No N/A Yeş 8.04 The Correct Tracer and QC Vials Where Used in the Samples No N/A Yeş 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample No N/A Yeş 8.06 At Least the Minimum Sample Volume Was Used Yes No/ N/A Analysis Volume => JMEL71AD 189.30<200.00 JMER91AD 100.00<200.00 Q:VB 8.07 The Correct Count Geometry was Used. No N/A Yeşr 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. No N/A Yeş 8.09 Method Blank is within Control Limits. No N/A OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. No N/A OK (RPD) 8.14 LCS within Control Limits. No N/A 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/A No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. No N/A Yes 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) No N/A 8.19 Sample Specific MDC <= CRDL. No N/A OK 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag. Yes No N/A No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag.</p> Yes No/ N/A Batch Positive Result => JMEL71AD BETA 6.0E+01 L:3.2E+00 JMEME1AD BETA 2.5E+01 L:2.9E+00 JMEMG1AD BETA 1.0E+01 L:2.8E+00 JMEMH1AC BETA 1.7E+01 L:2.6E+00 JMER91AD BETA 3.3E+03 L:3.4E+00 JMETL1AD BETA 2.5E+03 L:2.8E+00 8.23 Result <= Action Level, when Defined.</p> No N/A OK; No Action Level Found => BETA

STL Richland

OK; No Callin Level Found => BETA

QAS_RADCALCv4.8.26

Page 1

	Result + 3s >=0, Not Too Negative. OK	Yes	No	N/A
ľ	Counting Spectrum are within FWHM Limits.	Yes	No	N/A
	No FWHM found in Batch Data!			V
8.26	Instruments have Current Calibrations.	Yes	No	N/A
	Correct Count Library Used.	Yes	No	N/A
	No Count Library found in Batch Data!			V
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version.	n Ysès	No	N/A
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	Vées i	on neo).	N/A
8.3 (Comments:			
8.31	Results Blank Subtracted as Appropriate.	Yeş	No	N/A
Na Salah	OK	V		

First Level Review STL Richland

QAS_RADCALCv4.8.26

m unecusa

1/3/107



Data Review Checklist RADIOCHEMISTRY Second Level Review

OC Batch Number:	7008352	
•	W05087	,

Review Item	Yes (√)	No (V)	N/A (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 			1
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4, Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?]		
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			Ì
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			

Second Level Review Review Que Que Date: 2-1-07



Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

2/1/2007 10:28:36 AM

Lot No., Due Date:

J7A040243; 02/16/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7008356; RSR85907 Sr-85/90 by GPC-7

SDG, Matrix:

W05087; WATER

SDG, Matrix.	USU87; WATER			
1.0 COC 1.1 Is the ICOC page complete; incl	udes all applicable analysis, dates, SOP numbe	ers, and revisions?	Yes No	N/A
2.0 QC Batch 2.1 Do the Summary/Detailed Repo	rts include a calculated result for each sample I	listed on the QC Batch Sheet?	Yes No	N/A
2.2 Are the QC appropriate for the a	nalysis included in the batch?		Yes No	N/A
2.3 Is the Analytical Batch Workshe	et complete; includes as appropriate, volumes,	count times, etc?	Yeş No	N/A
2.4 Does the Worksheets include a	Tracer Vial label for each sample?		Yeş No	N/A
3.0 QC & Samples 3.1 Is the blank results, yield, and M	IDA within contract limits?		Yeş No	N/A
3.2 Is the LCS result, yield, and MD.	A within contract limits?		Yes No	N/A
3.3 Are the MS/MSD results, yields,	and MDA within contract limits?		Yes No	N/A
3.4 Are the duplicate result, yields, a	and MDAs within contract limits?		Yes No	N/A
3.5 Are the sample yields and MDA	s within contract limits?		Yes No	N/A
I.0 Raw Data I.1 Were results calculated in the co	orrect units?		Yeş No	N/A
.2 Were analysis volumes entered	correctly?		Yes No	N/A
.3 Were Yields entered correctly?			Yeş No	N/A
1.4 Were spectra reviewed/meet co	ntractual requirements?		Yes No	N/A
4.5 Were raw counts reviewed for a	nomalies?		Yes No	N/A
5.0 Other 5.1 Are all nonconformances include	ed and noted?		Yes No	N/A
5.2 Are all required forms filled out?			Yes No	N/A
5.3 Was the correct methodology us	sed?		Yes No	N/A
6.4 Was transcription checked?		nna na na ma manana mata mina na minamanahimahan eza in minamezzarezezezezez	Yes No	N/A
5.5 Were all calculations checked a	t a minimum frequency?		Yes No	N/A
6.6 Are worksheet entries complete	and correct?		Yeş No	N/A
6.0 Comments on any No response			<u></u>	
		en et 2. dages en 1920 august est est sommen en e	ess succession accession and accession and accession accession and accession accession and accession accession The contraction accession	sesse of the section of
First Level Review Pan	Janderson	Date		
STL Richland DAS_RADCALCv4.8.26			Page 1	



OC Batch Number:

Data Review Checklist RADIOCHEMISTRY Second Level Review

603087			
Review Item	Yes (√)	No (V)	$N/A(\sqrt{)}$
A. Sample Analysis			1 - 11 - 11
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	The state of the s		
3. Are the correct isotopes reported?	-		
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 	_		
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	/.		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?	pure minutes in the second		
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			-
9. Do the duplicate sample results and yields meet acceptance			
criteria?	- Secretary Constitution of the Constitution o	}	
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
2. Are all required forms filled out?			

4. Was transcription checked?			╣.
5. Were all calculations checked at a minimum frequency?			-
6. Were units checked?	Superior Section 1		-
Comments on any "No" response:			7
•			
Second Level Review Thurry a Rola	Large .	Date: Z-J-C	ケク

3. Was the correct methodology used?



Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

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Lot No., Due Date:

J7A040243; 02/16/2007

Client, Site:

384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 7008355; RGAMMA Gamma by GER

SDG, Matrix:

QAS_RADCALCv4.8.26

W05087; WATER

SDG, Matrix:	W05087; WATER			
1.0 COC 1.1 Is the ICOC page com	nplete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0 QC Batch 2.1 Do the Summary/Deta	ailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yeş	No	N/A
2.2 Are the QC appropriate	te for the analysis included in the batch?	Yeş	No	N/A
2.3 Is the Analytical Batch	Worksheet complete; includes as appropriate, volumes, count times, etc?	Yeş	No	N/A
2.4 Does the Worksheets	include a Tracer Vial label for each sample?	Yes	No	N/A
3.0 QC & Samples 3.1 Is the blank results, yie	eld, and MDA within contract limits?	Yeş	No	N/A
3.2 Is the LCS result, yield	d, and MDA within contract limits?	Yeş	No	N/A
3.3 Are the MS/MSD resul	Its, yields, and MDA within contract limits?	₩ Yes	No	N/A
3.4 Are the duplicate resul	lt, yields, and MDAs within contract limits?	Yeş	No	N/A
3.5 Are the sample yields	and MDAs within contract limits?	Yeş	No	N/A
4.0 Raw Data 1.1 Were results calculate	ed in the correct units?	Yes	Nο	N/A
.2 Were analysis volumes		Yeş		
.3 Were Yields entered co	porrectly?	₩. Yes	No	N/A
.4 Were spectra reviewed	d/meet contractual requirements?	Yeş	No	N/A
.5 Were raw counts revie	ewed for anomalies?	Yeş	No	N/A
5.0 Other 5.1 Are all nonconformanc	ces included and noted?	Yes	No	N/A
5.2 Are all required forms f	filled out?	Yeş	No	₩ N/A
5.3 Was the correct metho	odology used?	Yeş	No	N/A
6.4 Was transcription chec	cked?	Yeş	No	N/A
5.5 Were all calculations c	checked at a minimum frequency?	Yeş	No	N/A
5.6 Are worksheet entries	complete and correct?	Yeş	No	N/A
6.0 Comments on any No	response:	<u>\</u>		
	The state of the s	A. 1000000 10.00.000	C0000000000000000000000000000000000000	
1				
First Level Review	Pan and anderson Date 1-30.0	2	_	
TL Richland		Page	1	



Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	7008355
•	W05087

Review Item	Yes (√)	No (V)	N/A (\(\frac{1}{2}\))
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?	1/2		
3. Is the blank result < the Contract Detection Limit?	/.		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?	į		
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			ļ
C. Other	·		1
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			•

Second Level Review. Therry a Colum. Date: 2-1-07



STL Richland

QAS_RADCALCv4.8.26

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

2/8/2007 10:52:49 AM

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Lot No., Due Date: J6L290155,J7A040232,J7A040240; 02/16/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 7008359; RGAMLEPS Gamma by LEPS SDG, Matrix: W05087; WATER 8.0 Correction Calculation Protocol Used. Yes No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yes No N/A Method Differs => JL8141AA LEP<>TB JL8141AC LEP<>TB JMEQA1AA LEP<>TB JMEQ51AA LEP<>TB JMERP1AA LEP<>TB JMJM71AA LEP<>TB JMJM71AC LEP<>TB Q:V6 8.02 Final Results Are in the Appropriate Activity Units Yes No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yes No N/A 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yes No N/A 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample Yes No N/A 8.06 At Least the Minimum Sample Volume Was Used Yes N/A No∕ Analysis Volume => JL8141AA 3.902<4000.00 JMEQA1AA 3.956<4000.00 JMEQ51AA 3.963<4000.00 JMERP1AA 3.937<4000.00 Q:VB 8.07 The Correct Count Geometry was Used. Yes No N/A Count Geometry => JL8141AA I_FA<>IFA JL8141AC I_FA<>IFA JMEQA1AA I FA<>IFA JMEQ51AA I_FA<>IFA JMERP1AA I FA<>IFA JMJM71AA I_FA<>IFA JMJM71AC I_FA<>IFA Q:VC 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. No N/A 8.09 Method Blank is within Control Limits. Yes No N/A OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. N/A Yes No No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). Yes∉ No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yes No N/A OK (RPD) 8.14 LCS within Control Limits. Yes No N/A OK 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/A No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. Yeş No N/A OK 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yeş No N/A 8.19 Sample Specific MDC <= CRDL. Yes No N/A OK 8.2 Comments:

8.21	Result < Lc, Activity Not Detected, U Flag.	Yes	No	N/A
8.22	No Limit Specified! Programmer Result < Mdc, Activity Not Detected, U Flag. Batch Positive Result => JL8141AA I-129L 9.6E-01 L:5.0E-01	Yes	No	N/A
8.23	JMEQ51AA I-129L 4.8E-01 L:3.9E-01 Result <= Action Level, when Defined. OK; No Action Level Found => I-129L	Yes	No	N/A
8.24	OK; No Callin Level Found => I-129L I Result + 3s >=0, Not Too Negative. OK	Yes	No	Ņ/A
8.25	Counting Spectrum are within FWHM Limits.	Yes	No	N/A
8.26	FWHM > maxFWHM => JMJM71AC I-129L 18>0 Q:V1 Instruments have Current Calibrations.	Yes	No	N/A
	Correct Count Library Used. Library Not Specified => JL8141AA I:[NUC_LIBR]LEPS.NLB Q: JL8141AC I:[NUC_LIBR]LEPS.NLB Q: JMEQA1AA I:[NUC_LIBR]LEPS.NLB Q: JMEQ51AA I:[NUC_LIBR]LEPS.NLB Q: JMERP1AA I:[NUC_LIBR]LEPS.NLB Q: JMJM71AA I:[NUC_LIBR]LEPS.NLB Q: JMJM71AC I:[NUC_LIBR]LEPS.NLB Q:			N/A
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version.	n¥e)s	No	N/A
8.29	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	∨ Yéess io	oi neò .	N/A
8.3	Comments:			
8.31	Results Blank Subtracted as Appropriate. OK	Yes	No	N/A
Fire	st Level Review Pan anderson Date 2.7.08			

STL Richland
QAS_RADCALCv4.8.26

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QC Batch Number:

Data Review Checklist RADIOCHEMISTRY Second Level Review

w05017			
	•		
Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis			· · · · · · · · · · · · · · · · · ·
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	/.		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			· · · · · · · · · · · · · · · · · · ·
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?		 	

2. 1130 til roddied forms fined Out:	1 - 1		I	i
3. Was the correct methodology used?				
4. Was transcription checked?				
5. Were all calculations checked at a minimum frequency?		:		
6. Were units checked?				
Comments on any "No" response:				l
		,		-

Second Level Review: <u>Sherryl</u> A Alan	4	Date: <u>∠</u>	-9-0	go-ogo



Data Review/Verification Checklist

1/30/2007 11:13:38 AM

RADIOCHEMISTRY, First Level Review Lot No., Due Date: J6L290153,J6L290150,J7A040214,J7A040240; 02/16/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 7008361; RTC99 Tc-99 by LSC SDG, Matrix: W05087; WATER 8.0 Correction Calculation Protocol Used. Yes No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yes No N/A 8.02 Final Results Are in the Appropriate Activity Units Yes No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yes No N/A 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yes No/ N/A Incorrect Tracer/Vial => JL8XA1AC TCSG<>TCSE Q:V9 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample No N/A 8.06 At Least the Minimum Sample Volume Was Used No N/A Yes OK 8.07 The Correct Count Geometry was Used. Yes No N/A 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yes No N/A 8.09 Method Blank is within Control Limits. Yes No N/A 8.1 Comments: 8.11 Matrix Blank is within Control Limits Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). Yes No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. Yeş No N/A OK (RPD) 8.14 LCS within Control Limits. Yes No N/A OK 8.15 MLCS within Control Limits. Yes No N/A No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/A OK 8.17 Tracer within Control Limits Yes No N/A No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! 8.19 Sample Specific MDC <= CRDL. Yes No N/A OK 8.2 Comments: 8.21 Result < Lc, Activity Not Detected, U Flag. Yes No N/A No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. Yeş No N/A No Positive Results OK Calc_IDL Not Calculated 8.23 Result <= Action Level, when Defined. Yes No N/A OK; No Action Level Found => TC-99 OK: No Callin Level Found => TC-99 8.24 Result + 3s >=0, Not Too Negative. Yeş No N/A 8.25 Counting Spectrum are within FWHM Limits. Yes No N/A No FWHM found in Batch Data!

STL Richland

OAS RADCALCV4.8.26

3.26 Instruments have Current Calibrations.	Yes 1	No	N/A
3.27 Correct Count Library Used. No Count Library found in Batch Data! 3.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be develo	Yes N		V
3.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be			
.3 Comments:			
31 Results Blank Subtracted as Appropriate.	Yeş N	No	N/A
OK	······································		1 4/ /
rst Level Review Pam Anderson Date _/	30-27		
L Richland S_RADCALCv4.8.26	Page 2		



Data Review Checklist RADIOCHEMISTRY Second Level Review

OC Batch Number:	7008361
•	W05087

A. Sample Analysis 1. Are the sample yields within acceptance criteria? 2. Is the sample Minimum Detectable Activity < the Contract Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria? 3. Is the blank result < the Contract Detection Limit? 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria?	Yes (V)	No (√)	N/A (V)
 Is the sample Minimum Detectable Activity < the Contract Detection Limit? Are the correct isotopes reported? QC Samples Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 			
 Is the sample Minimum Detectable Activity < the Contract Detection Limit? Are the correct isotopes reported? QC Samples Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 			
Detection Limit? 3. Are the correct isotopes reported? B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria? 3. Is the blank result < the Contract Detection Limit? 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria?			
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 2. Does the blank result meet the Contract criteria? 3. Is the blank result < the Contract Detection Limit? 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria?			
 Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 	<i>J.</i>		
 Contract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 	<u></u>		
 Contract Detection Limit? Does the blank result meet the Contract criteria? Is the blank result < the Contract Detection Limit? Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 			
 3. Is the blank result < the Contract Detection Limit? 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria? 	<u>/.</u>		
 4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit? 5. Is the LCS recovery with contract acceptance criteria? 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria? 			
 result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 			
 result < the Contract Detection Limit? Is the LCS recovery with contract acceptance criteria? Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? Do the MS/MSD results and yields meet acceptance criteria? 			
 7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit? 8. Do the MS/MSD results and yields meet acceptance criteria? 			
Limit? 8. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the MS/MSD results and yields meet acceptance criteria?	<i></i>		
8. Do the MS/MSD results and yields meet acceptance criteria?			1
9. Do the duplicate sample results and yields meet acceptance			
criteria?			1
C. Other	,		-
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?		***************************************	·

Second Level Review Therryl a Alan Date: 130-07



QAS_RADCALCv4.8.26

Data Review/Verification Checklist RADIOCHEMISTRY, First Level Review

1/26/2007 1:43:43 PM

Lot No., Due Date: J7A040214,J7A040243; 02/16/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 7008350; RTRITIUM H-3 by LSC SDG, Matrix: W05087; WATER 8.0 Correction Calculation Protocol Used. Yes No N/A OK 8.01 The Appropriate Methods Were Used To Analyze the Samples No N/A Yes 8.02 Final Results Are in the Appropriate Activity Units No N/A Yeş 8.03 Batch Contains the Required QC Appropriate for the Method No N/A Yes 8.04 The Correct Tracer and QC Vials Where Used in the Samples No N/A Yeş OK 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample No N/A Yes 8.06 At Least the Minimum Sample Volume Was Used No/ N/A Yes Analysis Volume => JMEL71AA 5.00<10.00 OR AL 107 JMEME1AA 5.00<10.00 JMEMG1AA 5.00<10.00 JMER91AA 5.00<10.00 JMETL1AA 5.00<10.00 Q:VB 8.07 The Correct Count Geometry was Used. No/ N/A Count Geometry => JMJMX1AF SVP15/5<>SVP10/10 JMJMX1AG SVP15/5<>SVP10/10 0/2 AL JMJMX1AA SVP15/5<>SVP10/10 JMJMX1AC SVP15/5<>SVP10/10 JMJMX1AD SVP15/5<>SVP10/10 JMJMX1AE SVP15/5<>SVP10/10 JMEL71AA SVP15/5<>SVP10/10 JMEME1AA SVP15/5<>SVP10/10 JMEMG1AA SVP15/5<>SVP10/10 JMER91AA SVP15/5<>SVP10/10 JMER91AG SVP15/5<>SVP10/10 JMETL1AA SVP15/5<>SVP10/10 Q:VC 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. No N/A 8.09 Method Blank is within Control Limits. No N/A 8.1 Comments: 8.11 Matrix Blank is within Control Limits. No N/A 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). No N/A Yeş 8.13 QAS Specified Duplicate Equation Value within Control Limits. No N/A Yeş OK (RPD) 8.14 LCS within Control Limits. No N/A Yeş OK 8.15 MLCS within Control Limits. No N/A Yeş 18.16 MS within Control Limits. No N/A Yes No Matrix Spike Samples (MS) found in Batch! 8.17 Tracer within Control Limits. Yes No N/A No Tracers found in Batch! 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) Yes No N/A No Tracers found in Batch! 8.19 Sample Specific MDC <= CRDL. No N/A Yeş OK 8.2 Comments: STL Richland Page 1

8.21	1 Result < Lc, Activity Not Detected, U Flag. No Limit Specified!	Yes	No	N/A
8.22	Result < Mdc, Activity Not Detected, U Flag.	V	NI.	N/A
	No Positive Results		NO	N/A
	OK Calc_IDL Not Calculated			
8.23	Result <= Action Level, when Defined.	Yeş	No	N/A
	OK; No Action Level Found => H-3	V		
	OK; No Callin Level Found => H-3			
8.24	Result + 3s >= 0, Not Too Negative.	Yeş	No	N/A
	OK			
8.25	5 Counting Spectrum are within FWHM Limits.	Yes	No	N/A
0 26	No FWHM found in Batch Data! 3 Instruments have Current Calibrations.			W
0.20	instruments have current calibrations.	Yes	No	N/A
8.27	7 Correct Count Library Used.	Yes	Nο	N/A
	No Count Library found in Batch Data!			
8.28	Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in	later version s	No	N/A
	Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be develo			
		ped in later v ees t) (INEX).	N/A
8.3	Comments:			
8.31	Results Blank Subtracted as Appropriate.	Yeş	No	N/A
*****************		•	Shares Complete Marketine	- Negative general payment payment payment

First Level Review Mylla Mylla Mylla College Date 1-26.07

STL Richland
QAS_RADCALCV4.8.26

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Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	700/350	
•	W 05087	

A. Sample Analysis	Yes (√)	No (1)	N/A (√)
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?	. /		
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 	ļ		
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	- American Control		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?			
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?			
5. Were all calculations checked at a minimum frequency?			
6. Were units checked?			·

Second Level Review: Sherryl R Colume Date: 127-07



8.24 Result + 3s >=0, Not Too Negative.

OK STL Richland

QAS_RADCALCv4.8.26

Data Review/Verification Checklist

2/7/2007 9:08:37 AM

Yes No N/A

Page 1

RADIOCHEMISTRY, First Level Review Lot No., Due Date: J7A040214, J7A040240; 02/16/2007 Client, Site: 384868; PGW 615HANFORD HANFORD QC Batch No., Method Test: 7008353; RUNAT UNat by KPA SDG, Matrix: W05087; WATER 8.0 Correction Calculation Protocol Used Yeş No N/A 8.01 The Appropriate Methods Were Used To Analyze the Samples Yeş No N/A 8.02 Final Results Are in the Appropriate Activity Units Yes No N/A 8.03 Batch Contains the Required QC Appropriate for the Method Yes No N/A OK 8.04 The Correct Tracer and QC Vials Where Used in the Samples Yes No⁄N/A Incorrect Tracer/Vial => JMJM31AD UNSC<>UNSF Q:V9 8.05 Sample was Appropriately Traced Before or After Fractionating the Sample No N/A Yes Yes No N/A 8.06 At Least the Minimum Sample Volume Was Used No Count Analysis Size found in Batch Data! 8.07 The Correct Count Geometry was Used. Yes No N/A No Count Geometry found in Batch Data! 8.08 The Sample was Counted for the Minimum Count Time or CRDL was Achieved. Yes No N/A No Count Duration Field Found in Batch Data! 8.09 Method Blank is within Control Limits No N/A Yes OK 8.1 Comments: 8.11 Matrix Blank is within Control Limits. Yes No N/A No Matrix Blanks (MBlks) found in Batch! 8.12 Method Blank(s) < QAS Limit Value (No B Flag Necessary). Yes No N/A 8.13 QAS Specified Duplicate Equation Value within Control Limits. No N/A Yes∉ OK (RPD) 8.14 LCS within Control Limits. No N/A Yes⊬ Yes No N/A 8.15 MLCS within Control Limits No Matrix Spikes (MLCS) found in Batch! 8.16 MS within Control Limits. Yes No N/A 8.17 Tracer within Control Limits. Yes No N/A No Tracers found in Batch! Yes No N/A 8.18 Samples are above Minimum Tracer Yield (No Failed Samples) No Tracers found in Batch! 8.19 Sample Specific MDC <= CRDL. Yes No N/A MDC/MDA > CRDL => JMJM31AA Uranium 2.1E-01>1.4E-01 Q:C1 8.2 Comments: Yes No N/A 8.21 Result < Lc, Activity Not Detected, U Flag. No Limit Specified! 8.22 Result < Mdc, Activity Not Detected, U Flag. Yes No N/A Batch Positive Result => JMEL71AF Uranium 9.1E+00 L:7.8E-02 JMEME1AF Uranium 8.4E+00 L:8.2E-02 JMEMH1AE Uranium 8.6E+00 L:8.3E-02 JMERP1AC Uranium 2.6E+00 L:8.0E-02 JMERQ1AC Uranium 1.8E+01 L:7.7E-02 8.23 Result <= Action Level, when Defined. No N/A OK; No Action Level Found => Uranium OK; No Callin Level Found => Uranium

8.25 Counting Spectrum are within FWHM Limits.	Yes	No	N/A
No FWHM found in Batch Data! 8.26 Instruments have Current Calibrations.		N.I	N/A
o.20 instruments have current camprations.	Yes	ИО	N/A
8.27 Correct Count Library Used.	Yes	No	N/A
No Count Library found in Batch Data! 8.28 Instrument Background within Limits at Time of Counting. (Not Applicable to this version. To be developed in later version.	on Ysès	No	N/A
8.29 Instrument Check Source within Limits at the Time of Counting. (Not Applicable to this version. To be developed in later	∵∨Weesio	on Meò .	N/A
8.3 Comments:	***************************************		
8.31 Results Blank Subtracted as Appropriate.	Yeş	No	N/A
OK	. .	9 40 19 WO 10 MINES	500004400 000es 0ec 000 - 1
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First Level Review Parn Anderson Date 2-7-07			
Date de 1901			1

STL Richland

QAS_RADCALCv4.8.26



Data Review Checklist RADIOCHEMISTRY Second Level Review

QC Batch Number:	7008353
	W05087

Review Item	Yes (√)	No.(1)	N/A (V)
A. Sample Analysis			1
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			.
3. Are the correct isotopes reported?			
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	1		
4. Is the blank result > the Contract Detection Limit but the sample			
result < the Contract Detection Limit?		ļ	1 /
5. Is the LCS recovery with contract acceptance criteria?			
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection			
Limit?			
8. Do the MS/MSD results and yields meet acceptance criteria?			
9. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other			
1. Are all Nonconformances included and noted?			
2. Are all required forms filled out?			
3. Was the correct methodology used?			
4. Was transcription checked?		 	
5. Were all calculations checked at a minimum frequency?		_	-
6. Were units checked?			

1. Are all Nonconformances included and noted?				
2. Are all required forms filled out?				
3. Was the correct methodology used?				
4. Was transcription checked?				
5. Were all calculations checked at a minimum frequency?				
6. Were units checked?				
Comments on any "No" response:				
			·	

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Second Level Review. Hungl R Colon		D . 7	מ קיים	panage
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PNNLU61290150
WO5087
02-12-07

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# W07-012-350

Page	1	of	1	

12	1.12.0	つ'											Pag	e <u>1</u> of <u>1</u>	
Gallest Manford						ntact/Re			· · · · · · · · · · · · · · · · · · ·		phone No. 09-376-5056		MSIN	FAX	
SAF No. W07-012	CIN			20.00	San						Purchase Order/Charge Code				
Project Title RCRA, DECEMI	BER 2006						HNF-N-	506-3		Ice (Chest No.	727	Temp.		
Shinned To (Lab) Severn Trent Inco	***************************************	hland					Shipment			Bill	of Lading/Air	Bill No.			
Protocol RCRA	33. 34. 35. 35. 35. 35. 35. 35. 35. 35. 35. 35		encere constantement dependence con part con transfer	addition procedured bioteconic result of relationship		JOY C		ority: 45 Days		Offs	ite Property N	lo.			
POSSIBLE SAMP. ** ** Contains Rad releasable per DOE Ore	lioactive Materia	l at con	centrations that	are not regulat	ted for transportati	ion per 49	CFR but are not	closure of 14 days.	SCF: Batch all PNNL		mitted under A, C	G, I, S, and	tal Activity Exem I W 07 SAFs into on	ntion: Yes 🗹 1 ne SDG, not to excee	No d SDG
Sample No.	Lab ID	*	Date	Time	No/Type Cor	ntainer			Sample Analysi	is				Preservative	
B1LJ98		W	12.2806	1032	1x20-mL P		Activity Scan					lone			
B1LJ98		W	$\sqrt{}$	Q	1x500-mL F)	TC99_ETVDSK_	LSC: Tc-99 (1)	///		ŀ	ICI to ph	H <2		
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Relinquished By	Nos v	yy u	1		Date/Time	2	Received By		DLU L	- E3 - F1	Date/Time		S = Soil SE = Sediment SO = Solid SI = Sludge W = Water	DS = D DL = D T = Ti WI = W	rum Liaui issue Vine
Relinquished By					Date/Time	е	Received By				Date/Time		W = Water O = Oil A = Air	I. = I.i V = V X = O	egetation
Relinquished By					Date/Time	е	Received By				Date/Time	L			•
FINAL SAMPL	~ 1 '	Method	l (e.g., Return to	customer, per	lab procedure, use	ed in proc	l ess)		Disposed By				Date	e/Time	

PNNL 161290150
NO5087
Due 02.12.07

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# W07-012-342

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Collector Hanford		A .C				Contact/Re			Telephone No.	MSIN	\	-		
SAF No. BREWI	VOTON					Dot Stew Sampling C			509-376-5056 Purchase Order/Charge Code					
W07-012		***	-	- Immediate		Hanford				, charge code				
Project Title RCRA, DECEM	DED 2006						HNF-R	6506-3	Ice Chest No.	122	Тетр.			
Shinned To (Lab)	DER 2000	numari internation				Method of	-		Bill of Lading/A	·············	Normalius Normal			
Severn Trent Inc	ornorated, Ric	hland			RATIONAL CONTRACTOR CO	Govt. Ve	hicle		0.00170					
Protocol RCRA							Pric	ority: 45 Days	Offsite Property	y No.				
POSSIBLE SAMP ** ** Contains Rac releasable per DOE Or	lioactive Materia	l at co	ncentrations that	: are not regulat	ed for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNNL: closure of 14 days. WSCF: Batch all PNNL GW samples sub		A, G, I, S, and W 07 S	vity Exemption: Yes 🗹 AFs into one SDG, not to excee	No Led SDG		
Sample No.	Lab ID	*	Date	Time	No/Туре	Container		Sample Analysis	S		Preservative			
B1LJJ3		W	12.2806	0937	1x20-mL	- P	Activity Scan		***************************************	None				
B1LJJ3		w	1	11/	1x500-m	ıL P	TC99_ETVDSK_L	.SC: Tc-99 (1)		HCl to pH <2				
		1	1 1					Management of the Control of the Con				****		
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Relinquished By OF Hantord R. BREWINGTON	OL Frint	WU	Sign	DEC 2 F	3 2006	Time 1300	Received By	Sign DE	Date/Time/		Matrix * Soil DS = D)rum Solid		
Relinquished By	*	Procession of the second			Date/	Time	Received By		Date/Time	SE = SO = SL =	Sediment DI. = D Solid T = T Sludge WI = W	Drum Liaui Pissue Vine		
Relinquished By			~		Date/	Time	Received By		Date/Time	0 =		ionid Jegetation Other		
Relinquished By				VII - I COMMITTEE	Date/	Time	Received By		Date/Time		101111111111	•		
FINAL SAMPL DISPOSITION	- 1 -	Method	d (e.g., Return to	customer, per	lab procedur	e, used in proc	ess)	Disposed By			Date/Time			

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PNNIJ61290/50
W05087
Due 02-12-07
NUL 02 12 0 1 1
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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# W07-012-318

Due	1050 <u>02-15</u>	'S , (· ()	7									Page	<u>1</u> of <u>1</u>	
albedianiord	<u> </u>					1 7				Telephone No. MSIN FAX				
SAF No. W07-012	1916/ce-manus		79700			Hanford Site				509-376-5056 Purchase Order/Charge Code				
Project Title RCRA, DECEMBE	R 2006					HNF-N-506-3				Ice Chest No. 022 Temp.				
Shinned To (Lab)		alon d	na anno acceptation de la companya d				ethod of Shipment Govt. Vehicle				Bill of Lading/Air Bill No.			
Severn Trent Incorporated, Richland Green Protocol RCRA							Priority: 45 Days Offsite Property No.					**************************************		
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transporteleasable per DOE Order 5400.5 (1990/1993)							SPECIAL INSTRUCTIONS Hold Time All Labs except WSCF: Batch all PNNL samples submitted under A closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, dail			es submitted under A,				o L SDG
Sample No.	Lab ID	Lab ID * Date Time No/Type					Container Sample Analysis				Preservative			
B1LJ83		w	122806	1103	1x20-mL	Р	Activity Scan				None			
B1LJ83		W	1	1	1x500-ml	- P	TC99_ETVDSK_LSC: Tc-99 (1)				HCl to pH <2			
						· · · · · · · · · · · · · · · · · · ·		JL8XA				4 4444		
							113741		register.					
Annual Control of the											e e e e e e e e e e e e e e e e e e e			
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Relinquished By Fluor Hanford D. R. BREWINGTON	OL /	t NW	Sign	DEC 2	8 2006	ime / 30E	Received By	Som He Sig	ner 2 g	Date/Time (S =	Matri	DS = Dru	
Relinquished By	, , , , , , , , , , , , , , , , , , ,		Vanish and the second		Date/T	ime	Received By Date/Time				SO = SL =	SE = Sediment DL = Drum Lion SO = Solid T = Tissue SL = Sludge WI = Wine		
Relinquished By					Date/T	ime	Received By $ \begin{array}{c cccc} & W & W & V & V & V & V & V & V & V & V$				V = Ves	getation		
Relinquished By					Date/T	ime	Received By			Date/Time				
FINAL SAMPLE DISPOSITION	Disposal N	Method	(e.g., Return to	customer, per	lab procedure.	used in proc	ess)) Disposed By Date/Time						

PNNLUG L Auc Collection Hanton D R BREWL	290.	150	2		CHAIN O	F CUSTODY	Y/SAMPLE ANALY	SIS REQUEST	С.0	W07-012-310 Page 1 of 1		
Collectup Hantor	d NGTON					ct/Requester		Telephone No.				
D. R. BREWI	1401201	********		***************************************		Stewart ing Origin		509-376-5056 Purchase Order	056 der/Charge Code			
W07-012 Project Title					Han	ford Site			Temp.			
RCRA, DECEM	BER 2006					1/N/	N.506.3	Ice Chest No.	Bill of Lading/Air Bill No.			
Shinned To (Lab) Severn Trent Inc	ornorated Ric	hland		ustamus enemeridaey terralisis alsist		d of Shipment t. Vehicle						
Protocol					1 300		Priority: 45 Days	v No.				
RCRA POSSIBLE SAMP ** ** Contains Rac releasable per DOE Or	lioactive Materia	ıl at con	centrations that	are not regula	ated for transportation p		SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PN closure of 14 days. WSCF: Batch all PNNL GW sample	· · · · · · · · · · · · · · · · · · ·	A, G, I, S, and W 07 SAFs	Exemption: Yes V No into one SDG, not to exceed SDG		
Sample No.	Lab ID	*	Date	Time	No/Type Contain	ner	Sample Ana	alysis		Preservative		
B1LJ78		W	122806	1133	1x20-mL P	Activity Scan			None			
B1LJ78		W	L	1	1x500-mL P	TC99_ETVDSK	(_LSC: Tc-99 (1)		HCl to pH <2			
							JL	867				
								Auditor Additional Michigany Addition				
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		1								www.		
	 											
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Refingeis Meta Riord D. R. BREWIN	GTON L	news	Sign	DEC 2	Date/Time / 3	300 Received By	Ith S. Snith D	EC 2 8 2006	1360 S = Soi	Matrix * 1 DS = Drum Solid		
Relinquished By		**************************************)		Date/Time	Received By		Date/Time	SE = Sec SO = Sol SI = Slu W = Wa	timent DI. = Drum Liqui id T = Tissue dge WI = Wine		
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation		
Relinquished By					Date/Time	Received By		Date/Time				
FINAL SAMPL	E Disposal	Method	(e.g., Return to	customer, per	r lab procedure, used in	ı process)	Disposed By			Date/Time		

DISPOSITION



Sample Check-in List

Date	/Time Received:	2-28-06 1300				
Clier	nt: Pow	SDG #: WOS	087 NA[]	SAF#: <i>4</i>	107-012 NATI	
Wor	k Order Number:(161290150			7-012-350,310,	318 211.
Ship	ping Container ID:_	022	Air Bill # _O [A	30)010,	510,042
1.	Custody Seals c	on shipping container intact?			Yes [/ No []	
2.	Custody Seals c	lated and signed?			Yes (/) No []	
3.	Chain of Custoo	dy record present?			Yes / No[]	
4.	Cooler tempérai	ure: NA [] 5.	Vermiculite/packi	ng material	sie Na (* ma	
6.	Number of sam	oles in shipping container:_	4	ab muco (a)	well Dry	ı
7.		times exceeded?	And the second s	Na 1 x	Vanti N. ()	
8.	Samples have:				Yes [] No []	
	tape custody se	eals	h	azard labels		
9.	Samples are:in good ecbroken	ondition	le	aking ave air bubl	amples labels ples equiring head space)	
10.	Sample pH taker	n? NA[] pH<2	/ pH>2[]		odan mg nead space)	
11.	Sample Location *For documentat	, Sample Collector Listed? ' ion_only. No corrective acti	*	•	Yes [/ No []	
12.	Were any anoma	lies identified in sample reco	eipt?		Yes [] No/)	
13.	Description of an	omaties (include sample nu	mbers): N/A	And the state of t		
***************************************				هود او در در دو دو او سوسه و در سوسه دو سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه دو در سوسه در سو		
Sample	Custodian:	· Smith	Date: /	2-28-	06	
Cli	ent Sample 1D	Analysis Requested	Condition		Comments/Action	
Client L	nformed on	by	Person cor	ntacted		
	action necessary; pro					
Project 1	vlanager		Date	described formers of humanic burnings of the second of party and selections of the second of the sec		
LS-023,	9/03, Rev. 5				and the second district and the second of the second of the party of t	

PNNL V Collector D. E.	L290	15	3	l	CHAIN O	F CUSTODY/	SAMPLE ANALYS	IS REQUEST	C.o.c.# W07-012-404			
De.	2 021	Ž.	07						Page <u>1</u> of <u>1</u>			
Collector 🕽 🚍	FAROM	ΞN				t/Requester Stewart						
SAF No. W07-012	3000				Sampli	ng Origin Ford Site		Purchase Order/Charge Code	509-376-5056 Purchase Order/Charge Code			
Project Title RCRA, DECEMBER 2006						INF-N-50	06 1	Ice Chest No. Ross	Ice Chest No. Res S Temp.			
Shinned To (Lab)						d of Shipment		Bill of Lading/Air Bill No.				
Severn Trent Incorporated, Richland Protocol RCRA						. Vehicle Pric	ority: 45 Days	Offsite Property No.	Offsite Property No.			
** ** Contains Rad eleasable per DOE Ord	ioactive Materia	at con	centrations that	are not regulat	ed for transportation p	er 49 CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNN closure of 14 days. WSCF: Batch all PNNL GW samples s	L samples submitted under A, G, I, S, and W 0	ctivity Exemption: Yes Mo L 7 SAFs into one SDG, not to exceed SDG			
Sample No.	Lab ID	*	Date	Time	No/Type Contain	ner	Sample Analys	sis	Preservative			
B1LJJ8		W	12-28-01	1104	1x20-mL P	Activity Scan		None	· · · · · · · · · · · · · · · · · · ·			
B1LJJ8		W	+	4	1x500-mL P	TC99_ETVDSK_L	SC: Tc-99 (1)	HCl to pH <2	***************************************			
	3 - 1/1/1/1/11/11/11/11/11/11/11/11/11/11/1						JL81D)				
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Relinquished By	Print	Sign	Date/Time /	Received By	Print Sign	Date/Time ¹	ľ N	fatrix *
LD. E. PARGE		N	DEC 2 8 2006	&- Smith	J-Smith	DEC 28 2006	S = Soil	DS = Drum Solid
Relinquished By		<i>U</i>	Date/Time	Ŕeceived By		Date/Time	SE = Sediment SO = Solid SI = Sludge W = Water	DI = Drum Liani T = Tissue WI = Wine I = Lianid
Relinquished By			Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation X = Other
Relinquished By			Date/Time	Received By		Date/Time	No.	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g.,	, Return to custome	er, per lab procedure, used in pro	ocess)	Disposed By		Date/1	Time

11	100	· / /	<i>E</i> = 2					- Harrison	C.O.	C. #		
PNNL V6	11105	ロト	2		CHAIN OF	CUSTODY/	SAMPLE ANALY	SIS REOUEST		W07-012-396		
PNNL U6 Collector D. E	ue 112	.12	.07							Page <u>1</u> of <u>1</u>		
Collector D =	PARCH			voor felde kleuwe	Contact/R			Telephone No.	Telephone No. MSIN FAX			
SAF No.	Sharet Parameter State of the S				Dot Stev Sampling			509-376-5056 Purchase Order	S09-376-5056 Purchase Order/Charge Code			
W07-012 Project Title				***************************************	Hanford			Ica Chast No.	Ice Chest No. 7			
RCRA, DECEM					HN	F-N-50	6 1	Ice Chest No.		mp.		
Shinned To (Lab) Severn Trent Inc		hland			Method of Govt, V	Shipment ehicle		Bill of Lading/A	Bill of Lading/Air Bill No.			
Protocol RCRA		nedestrone consumble					ority: 45 Days	Offsite Property	No.			
POSSIBLE SAMI	dioactive Materi	al at con	ncentrations that	are not regula	ted for transportation per 4	·	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PN closure of 14 days. WSCF: Batch all PNNL GW sample		, G, I, S, and W 07 SAFs	Exemption: Yes V No into one SDG, not to exceed SDG		
Sample No.	Lab ID	*	Date	Time	No/Type Container		Sample Ana	ılysis		Preservative		
B1LJD6		W	12-28-06	10.10	1x20-mL P	Activity Scan			None			
B1LJD6		W	1	1	1x500-mL P	TC99_ETVD\$K_L	TC99_ETVDSK_LSC: Tc-99 (1)			HCI to pH <2		
							JL 800	7				
		-										
	<u> </u>	<u> </u>					44 YOM AND AND AND AND AND AND AND AND AND AND					
		+-			A138-000-00-00-00-00-00-00-00-00-00-00-00-0							
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Relinquished By	Print		Şign	A	Date/Time 130	Received By//	// Dint S Sim	Date/Time /	1700			
E PARCE	Print	<u> </u>	9		EC 2 8 2006	J. Swit	S-mull Sign	DEC 2 8 2	1006 S = Soil	Matrix * DS = Drum Solid		
Relinquished By			the most			Received By	·	Date/Time	SE	ment DI. = Drum Liqui I T = Tissue ge WI = Wine		
Relinquished By					Date/Time	Received By		Date/Time	O = Oil A = Air	V = Vegetation X = Other		
Relinquished By					Date/Time	Received By		Date/Time		Tanggaria.		
FINAL SAMPL DISPOSITION		Method	(e.g., Return to	customer, per	lab procedure, used in proc	eess)	Disposed By			Date/Time		

PNNL V G Alux Collector D.	1290.	15:	37	1	CHAI	N OF (CUSTODY	/SAMPLE ANALYS	S REQUEST		C.O.C.#	W07-012-3	326		
Due	2 02-10	2.0	7								Pa	age $\underline{1}$ of $\underline{1}$			
Collector D.	E. PARC		4			Contact/Re			Telephone No.	MSI	N	FAX			
SAF No. W07-012						Dot Stew Sampling C Hanford)rigin		509-376-5056 Purchase Order	Purchase Order/Charge Code					
roject Title RCRA, DECEM	DED 2006						uf -N - 5	06/	Ice Chest No.	Ice Chest No. RUSS Temp.					
Shinned To (Lah) Severn Trent Inc		phland			and the state of t	Method of Govt. Ve	Shipment			Bill of Lading/Air Bill No.					
Protocol RCRA	esta a control de la control d		manatat sensina Rahas na sensina dan dan dan dan dan dan dan dan dan d			0010. 10		ority: 45 Days	Offsite Propert	v No.			****		
POSSIBLE SAME ** ** Contains Ra- releasable per DOE On	dioactive Materia	al at cor	ncentrations that	are not regulat	ed for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNNI closure of 14 days. WSCF: Batch all PNNL GW samples s	*	A, G, I, S, and W 07		mption: Yes 🗹 N one SDG, not to exceed			
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sample Analys	is			Preservative			
B1LJ88		W	12-78-06	0921	1x20-mL	- P	Activity Scan	•		None					
B1LJ88		W	4	4	1x500-m	ıL P	TC99_ETVDSK_	LSC: Tc-99 (1)							
		-													
								The state of the s							
		1													
<u> </u>		\top				-							***************************************		

Relinquished By Print Sign Parchen Print Sign Print Sign Print Sign Print P	DEC 2 8 2006	Received/By Print Sign	Date/Time/300	M	atrix *
Relinquished By	DEC 2 8 2006 Date/Time	Received By	DEU 2 8 2005 Date/Time	S = Soil SE = Sediment SO = Solid SI = Sludge W = Water	DS = Drum Soli DI = Drum Liou T = Tissue WI = Wine
Relinquished By	Date/Time	Received By	Date/Time	O = Oil A = Air	I, = Liquid V = Vegetation X = Other
Relinquished By	Date/Time	Received By	Date/Time		
FINAL SAMPLE Disposal Method (e.g., Return to custome DISPOSITION	r, per lab procedure, used in p	rocess) Disposed By		Date/T	ime

PNNLC	16L290153 WOS087
d	he 02.12.07
Collector	D. E. PARCHEN

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# W07-012-294

De :	D3.11	. O . D.				. OF	COSTODIA		. OIO IV	EQUEST		D===	1 of 1		
Ollector D. E.	PARC.	HEN	<u> </u>			Contact/Re			1	Telephone No.	MSIN	Page FA			
SAF No.						Dot Stew Sampling C	Origin]	509-376-5056 Purchase Order/Char	ge Code				
W07-012 Project Title _RCRA, DECEMBEI	D 2006		***************************************			Hanford	Site 5F-N-50	Co 1		ce Chest No. RUS	~	Temp.			
Shinned To (Lab) Severn Trent Incorn		hland	ACCUPATION OF THE PROPERTY OF	aptrolet-integrational debit interpretations	Parameter and a second	Method of Govt. Ve	Shipment			Bill of Lading/Air Bill					
Protocol RCRA								ority: 45 Days		Offsite Property No.	ffsite Property No.				
POSSIBLE SAMPLE ** ** Contains Radioac eleasable per DOE Order	ctive Materia	l at con	centrations that a	are not regulate	ed for transpo	rtation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all Pr closure of 14 days. WSCF: Batch all PNNL GW sample		submitted under A, G, I, S	S, and W 07 S	vity Exemptio AFs into one SI	n: Yes 🗹 No OG, not to exceed S	o SDG	
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sample Ana	alysis			P	reservative		
B1LJ68		W	12-28-04	0821	1x20-mL	Р	Activity Scan		None)					
B1LJ68		W	4	+	1x500-ml	- P	TC99_ETVDSK_L	LSC: Tc-99 (1)	- HCI t	o pH <2					
·								<i>J.</i>	180						
			-												
											N				
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www.com.com						· · · · · · · · · · · · · · · · · · ·						W WHITE WAY			
Relinquished By Relinquished By	Print	0	Sign	TOE!	Date/T Date/T	2006	Received By Received By	The Sign	Canada de la canad	Date/Time	SO =	Sediment Solid	DS = Drur DL = Drur T = Tissi	m Liani ne	
Relinquished By			(CAMPANIAN AND AND AND AND AND AND AND AND AND A	-	Date/T	ime	Received By	,	·	Date/Time	W =	Sludge Water Oil Air	WI = Wind I. = Lion V = Vege X = Othe	rid etation	
Relinquished By		·		***************************************	Date/T	ime	Received By			Date/Time					
FINAL SAMPLE DISPOSITION	Disposal N	Method	(e.g., Return to o	customer, per l	lab procedure,	used in proce	l ess)	Disposed By	-		Date/Time				

TIME STL

Sample Check-in List

		2.78.06 1300		
Clien	1. Pow	SDG#:WO.	5087 NA[] SAF#:	W07-012 NACO
Work	Order Number:	161290153		7-012-294, 326, 396, 404
		ROSS	Air Bill # N/A	1,326,316
1.	Custody Seals	on shipping container intac		[] Yes [No []
2.	Custody Seals	dated and signed?		[] Yes / No[]
3.	Chain of Custo	dy record present?	6	Yes / No[]
4.	Cooler tempéra	ture: NA(V s	Vermiculite/packing motor	ials is NA (Wet[] Dry[]
6.	Number of sam	ples in shipping container:	4	alls is MA [] Wet [] Dry []
7.		times exceeded?		
8.	Samples have:		INA (Yes [] No []
	tape custody s	eals .	hazard lab	els 2 samples labels
9.	Samples are:in good cobroken	ondition	leaking have air bu	
10.	Sample pH take	n? NA[] pH<	2/ pH>2[] pH>9[
posses	Sample Location *For documenta	n, Sample Collector Listed? tion only. No corrective ac	· * *	Yes [] No []
12. 13.		nlies identified in sample re nomalies (include sample n	4	Yes[] No[/
and the second s		0 ,		
Sample	Custodian:	L. Smith	Date: 12-2	8.06 1300
Clie	ent Sample ID	Analysis Requested	Condition	Comments/Action

Client In	formed on	by	Person contacted	1
	action necessary; pr			
'roject N	Manager		Date	
	9/03, Rev. 5			

PNNL UGL290155
W05087
Due 02.12.07

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

107-015-2

W	0300	' ' .				CHICK	I Ox V	COSTODIA	OZ SIVER		ZI DID X	LQUESI					
Du	0500 202.10	2-0	7											Page	<u>1</u> of <u>1</u>		
Co llegger Hanford	rrok!						Contact/Re Dot Stew					Telephone No. 509-376-5056	MSI	N FA	AX		
AF No.	MARJIN .			- 111			Sampling (Origin				Purchase Order/	Charge Code				
I07-015 Project Title							Hanford		=======================================	, , , , , , , , , , , , , , , , , , ,		Ice Chest No.	0 7	Temp.			
2UP1-LOI, DECE	EMBER 2006						Method of	INF-N-	306 9			Ice Chest No. 022 (Temp. Bill of Lading/Air Bill No.					
Shinned To (Lab) Severn Trent Inco	proorated. Ric	hland					Govt. Ve										
Protocol SURV								Pri	ority: 45 D	ays		Offsite Property No.					
POSSIBLE SAMPI ** ** Contains Radi eleasable per DOE Ord	ioactive Materia	l at con	centrations that	t are no	ot regulat	ed for transpo	ortation per 49	CFR but are not	All Labs e closure of	INSTRUCTIONS except WSCF: Batch a 14 days. atch all PNNL GW sar	ıll PNNL sample		G, I, S, and W 07		on: Yes 🗹 1		
Sample No.	Lab ID	*	Date	T	ime	No/Type	Container			Sample .	Analysis				Preservative		
B1LK68		W	12.28.06	04	539	1x20-mL	. P	Activity Scan		**************************************			None				
B1LK68							mL G/P	I129LL_SEP_LE	PS_GS_LL:	I-129 (1)	*.*********		None				
													***************************************	enterty =	·····		
***************************************								A A A A A A A A A A A A A A A A A A A		5	1814	<i>f</i>					
				 													
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Relinquished Birlord	Print	1 K	Sign	, FA F	-	Date/	Time / 300	Received By	Prin	Sign		Date/Time/	300	Ma	atrix *		
D. R. BREWIN	GION NO	M	unz_	U	cu Z	8 200		15-18mg	<u> </u>	moll	DEC 2	····	S_ =	= Soil = Sediment	DS = Di		
Relinquished By			Andrew Principles			Date/	Time	Received By				Date/Time	SO = SL =	= Sediment = Solid = Sludge = Water	DI. = Dr T = Ti WI = W I. = Li	ssue 'ine	
Relinquished By			<u> </u>			Date/	Time	Received By				Date/Time	O =	= Oil = Aír		egetation	
Relinquished By		·				Date/	Time	Received By				Date/Time	*				
FINAL SAMPLI DISPOSITION	1 *	Method	l (e.g., Return to	o custo	mer, per	lab procedure	e, used in proc	eess)		Disposed By	,			Date/Ti	ine		

STI STL

Sample Check-in List

Date/T	ime Received:	12/28/06 130	0		
			15087 NA [SAFH: Z	107-015 NACI
Work	Order Number: <u>U</u>	61290155			
					The state of the s
1.	Custody Seals o	on shipping container into			
2.	Custody Seals of	lated and signed?			
3.	Chain of Custoo	dy record present?			
4.	Cooler tempéra	ture:NA	5. Vermiculite/pac	king marasial	
6.	Number of sam	oles in shipping container	-: /	vios material	s is NA / Wei [] Dry [
7.					N
8,	Samples have:			•	
	•	eals.		hazard labels appropriate s	s amples labels
9.	Samples are:	ondition	A same management and a	have air bubt	ples equiring head space)
10.	Sample pH taker	n? NA[] pF			
11.	Sample Location *For documentar	Sample Collector Ligar	12 %		Yes / No []
				e de la companya de l	Yes [] No[]
1 J.	Description of ar	oomalies (include sample	numbers): N//	9	
Sample	1	- Smith	Date:	13-28	.06 131
Clie	nt Sample 1D	Analysis Requested	and the first that the state of		and the contraction of the special and the contraction of the contract
				OR .	Comments/Action
Client Inf		the second secon	Person c	ontacted	
] No a	ction necessary; pro	ocess as is.		The state of the s	
2. Custody Seals dated and signed? 3. Chain of Custody record present? 4. Cooler temperature:NA_/5. Vermiculite/packing materials is NA_/Wei[]D 6. Number of samples in shipping container:/ 7. Sample holding times exceeded? 8. Samples have:tapehazard labels					
			- Alexander	enterior e displace e describe a presentativa de describe de describe de l'approprie de l'approprie	

PNNL J7	A0401	86 7		kes o	CHAI	N OF	CUSTODY/	SAMPLE ANALYS	SIS REQUEST	[<u> </u>	W07-012-2		
Collector Fluor	r Hanford	·····	1 3 3			Contact/Re			Telephone No.	MS		FAX		
R.T. SAF No.	SICKLE					Dot Stew Sampling (A STATE PARTY CO.	509-376-5056 Purchase Order	***************************************				
W07-012	······································					Hanford	Site	-						
Project Title RCRA, DECEM							HNF-N-	506 - 4	Ice Chest No. 640 - 06 - 11 Temp.					
Shinned To (Lah) Severn Trent Inc		blond				Method of Govt. Ve			Bill of Lading/A	ir Bill No.				
rotocol		en a constante de la constante				OOVI. VC		ority: 45 Days	Offsite Property	No.				
RCRA POSSIBLE SAMP ** ** Contains Ra eleasable per DOE O	dioactive Materia	l at con	centrations that	t are not regula	ted for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PN closure of 14 days. WSCF: Batch all PNNL GW samples	•	, G, I, S, and W 07		ption: Yes V No e SDG, not to exceed S		
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sample Ana	ysis			Preservative		
B1LF70		W	1/2/7	1129	1x1000-	mL P	9310_ALPHABET	A_GPC: Gross Alpha (1)	***************************************	HNO3 to pH <	2			
B1LF70		W	4	V	1x20-ml	_ P	Activity Scan			None				
								JMEFC				VIIII 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
						V50				505				
Relinquished By Fluor Ha R. T. SIO Relinquished By Relinquished By				JAN 0 2	Date/	Time	Received By Received By	h S-Smith	JAN 0 2 2007 Date/Time	SE = SO = SI = W = O	Soil Sediment Solid Sludge Water Oil Air	Matrix * DS = Drim DI = Drim T = Tissue WI = Wine I = Lionic V = Veget X = Other		

FINAL SAMPLE DISPOSITION

Relinquished By

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

Received By

Disposed By

Date/Time

Date/Time



Sample Check-in List

	1	1.02.07 /505			
Clien	: PGW	SDG #: <u>W</u>	05087 NA[]	SAF #: 6	007-012 NAM
Work	Order Number	1A040186			7-012-24
		wo-06-11			
1.	Custody Seals or	n shipping container inta	ct?] Yes [/ No []
2.	Custody Seals da	ited and signed?			Yes No ()
3.	Chain of Custod:	record present?			Yes () No []
4.	Cooler temperati	ne:NA 💋	5. Vermiculite/pack	ing materia	Is is NAK Wel [] Dry
6.	Number of samp	es in shipping container	:		o to tray Well Dry
7.	Sample holding t		e de la company		Yeo () NI- 1)
8.	Samples have:tapecustody sea	ıls .	h	azard label	Yes [] No []
9.	Samples are:in good corbroken	ndition	le	aking ave air bub	samples labels bles requiring head space)
10.	Sample pH taken?	NA[] pH	<2/1 pH>2[]		
11.	Sample Location, *For documentation	Sample Collector Listed on only. No corrective a	1? * ection needed.		Yes No[]
12.	Were any anomali	es identified in sample r	eceipt?		Yes [] No.F)
13.	Description of and	malies (include sample	numbers): N/A		100 () (10)
Sample	Custodian:	· Smith	Date: 0.	1.02.0-	1 1505
Cli	ent Sample ID	Analysis Requested	Condition	1	Comments/Action
Client In	formed on	by	Person co	Diacied	
] No :	action necessary; proc	ess as is.	1 9/30/1/00	HANGE TO THE THE THE THE THE THE THE THE THE THE	
			Date		
.S-023, 1	9/03, Rev. 5	The state of the s	and an internal production and an internal production of the state of	The second secon	

PNNL J74040214
W05087 Due 02.16.07

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

S07-012-500

1	00501	51	~			11 01	COSTODI	K 7 (.)			LQUEDI	-		D	1 -£		
Collector	Fluor Hanto D. E. PARCI	rd				Contact/Re			_	1	Telephone No.		MSIN	Page FAX	$\frac{1}{\mathbf{X}}$ of	<u> </u>	
SAF No.	U. E. PAHU	<u>1EN</u>				Dot Stew Sampling (_509-376-5056 Purchase Order		de	-			
S07-012			***************************************			Hanford				1							
Project Title SURV. DECEM	BER 2006					HWF	-N-50C	در سيبه مو	1]1	ce Chest No.	R059 Temp.					
Shipped To (Lab)	ANTERO PROPERTIES AND ANTERO PROPERTIES AND ANTERO PROPERTY OF THE PROPERTY OF	Sincolarizacioni principio de la constanta de	minimum manageri savan ing manageri savan ing		Management of the Control of the Con	Method of					Bill of Lading/A			ATTOMAC			
Severn Trent Inc Protocol SURV	cornorated. Ric	hland	anders commence de la loci de la	Machine Service in the control of th		Govt. Ve		Priori	 ty : 45 Days		Offsite Property	No.					
POSSIBLE SAMP ** ** Contains Rac releasable per DOE Or	dioactive Materia	al at con	ncentrations that	t are not regulat	ed for transp	ortation per 49	9 CFR but are not		PECIAL INSTRUCTIONS All Labs except WSCF: Batch all PN? closure of 14 days. WSCF: Batch all PNNL GW samples		submitted under A	, G, I, S, and \	il Activity E W 07 SAFs in	xemption to one SD	a: Yes 🗹	No Laced SDG	
Sample No.	Lab ID	*	Date	Time	No/Type	Container Container			Sample Analy	ysis				Р	reservative		
B1LDC7		W	1-2-07	0942	1x20-mL	- P	Activity Scan					None	******				
B1LDC7		W			1x1000-ı	mL P	9310_ALPHABE	ETA_	GPC: Alpha + Beta (2)		***************************************	HNO3 to p	H <2				
B1LDC7							TC99_ETVDSK	K_LS0	C: Tc-99 (1)		***************************************	HCl to pH <2					
B1LDC7	DC7 W 1x5						UTOT_KPA: Uranium (1)						HNO3 to pH <2				
									JME	MH				(1000)		THE RESIDENCE OF THE PARTY OF T	
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		<u> </u>							TEN CAMPAGE CONTRACTOR								
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Relinquish et Bot Ha D. E. PA	anford Print		Sign	4.00	Date/	134 12007	Received By J		Print Sign	8.0	Date/Time	345		Matr	rix *		
Relinquished By	HOHEN &		(Date/		Received By	<u> </u>	on i'm	JA	Date/Time	SF	E = Sedim D = Solid . = Sludge	e	DI. = T = WI =	Drum Solid Drum Liqui Tissue Wine	
Relinquished By					Date/	Time	Received By				Date/Time	O A			V =	Liquid Vegetation Other	
Relinquished By			•		Date/	Time	Received By				Date/Time	I			***************************************		
FINAL SAMPL DISPOSITION		dethod	(e.g., Return to	customer, per	lab procedure	e, used in proc	less)		Disposed By	THE TAXABLE STATE OF THE STATE			······································	Date/Time	<u></u> е		

PNNL J74040214
N W05087
Due 02.16.07

CITAIN OF CUCTODY/CAMDLE ANALYSIS DEOLIGOT

C.O.C.# S07-012-476

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de	LLE 02.	16.	07								Page	: <u>1</u> of <u>1</u>		
Collector	Pluof F D. E. P.	fantor 'ARCh	d IEN			Contact/Re)	Telephone I 509-376-		ISIN I	FAX		
SAF No. S07-012	***************************************		Transition and the second			Sampling (Origin			order/Charge Cod	e			
Project Title SURV, DECEM	DER 2006						W- 50 B	<i>S</i> /	Ice Chest N	t No. Ross				
Shinned To (Lab)		NO ASSOCIATION OF THE PROPERTY				Method of	Shipment		Bill of Ladi	ng/Air Bill No.	***************************************		-	
Severn Trent Inc. Protocol	cornorated. Ric	:hland			Administratives/pressure/property	Govt. Ve			Offsite Pro	- autor Na				
SURV							Pric	ority: 45 Days						
POSSIBLE SAMP ** ** Contains Rac releasable per DOE On	dioactive Materia	ial at con	ncentrations that	are not regulat	ted for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all closure of 14 days. WSCF: Batch all PNNL GW samp		nder A, G, I, S, and W	Activity Exemp 07 SAFs into one	otion: Yes 🗹 N e SDG, not to exceed	I SDG	
Sample No.	Lab ID	*	Date	Time	No/Type	e Container		Sample A	nalysis		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Preservative		
B1LDB2		W	1-2-07	1236	1x20-mL	LΡ	Activity Scan			None				
B1LDB2		W	1		1x1000-	-mL P	9310_ALPHABET	TA_GPC: Alpha + Beta (2)	***************************************	HNO3 to ph	1<2			
B1LDB2 W 1x1000					1x1000-	-mL P	906.0_H3_LSC: T	Fritium (1)	***************************************	None				
								JM	EMG					
					1						**************************************			
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L			L	.L	<u></u>		<i>i c -</i>		PROVINCE OF THE PROPERTY OF TH				***************************************	
Relinquished By	Print	-	Sign		Date	/Time /34	Received By	, Print , Sjgn	Date/	Time 1345	<u>N</u>	Matrix *		
Fluor H	lanford	()	DU!	· ·	IAN O	7 2007	1 d And	4 S. Smith	JAN 07 21	ስበን			~	
Relinquished B.F. P.	ARCHEN		*		***************************************	/Time	Received By	- Onnie	Date/1	Time SE	= Soil = Sediment	DS = Dn DI = Dn	rum Liani	
							Time Received by			SO SL	= Sludge	olid $T = Tissue$		
Relinquished By	***************************************	-		***************************************	Date/	/Time	Received By		Date/1	Time W O A	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Relinquished By				-	Date/	/Time	Received By		Date/1	Гіте				
FINAL SAMPL DISPOSITION		Method	d (e.g., Return to	customer, per	lab procedur	re, used in proc	ress)	Disposed By	V 100 All 100		Date/	Time	H	

PNNL JAPA040214 WOSD87
1000 12-16-07

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

S07-012-492

of 1 Collector Fluor Hanford Contact/Requester Telephone No. **MSIN** FAX Dot Stewart 509-376-5056 D F PARCHEN SAF No. Sampling Origin Purchase Order/Charge Code S07-012 Hanford Site Project Title Ice Chest No. Temp. HNF-W-506-1 SURV, DECEMBER 2006 Shipped To (Lab) Method of Shipment Bill of Lading/Air Bill No. Severn Trent Incorporated, Richland Govt. Vehicle Protocol Offsite Property No. Priority: 45 Days SURV POSSIBLE SAMPLE HAZARDS/REMARKS SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes V No ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG releasable per DOE Order 5400.5 (1990/1993) closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure. Sample No. Lab ID Date Time No/Type Container Sample Analysis Preservative B1LDC2 W -2-07 1x20-mL P Activity Scan 1134 None B1LDC2 W 1x1000-mL P 9310 ALPHABETA GPC: Alpha + Beta (2) HNO3 to pH <2 B1LDC2 W 1x500-mL P TC99 ETVDSK LSC: Tc-99 (1) HCl to pH <2 B1LDC2 W 1x1000-mL P 906.0_H3_LSC: Tritium (1) None B1LDC2 W 1x500-mL G/P UTOT KPA: Uranium (1) HNO3 to pH <2 TMEME Date/Time 34 Received By Date/Time /345 Relinquished By Print Sign Matrix * JAN 02 2007 JAN 0221117 Fluor Hanford = Soil DS = Drim Solid Relinquished by PARCHEN Date/Time Received By Sediment DL = Drum Liqui Date/Time = Solid = Tissue = Sludge WI = Wine = Water = Liquid Relinquished By Date/Time Received By Date/Time = Oil 0 = Vegetation = Air = Other Relinquished By Date/Time Received By Date/Time FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time DISPOSITION

PNNL 7A040214 W05087 Due 02-16-07	CHAIN OF CUSTODY
Collector Fluor Hanford D. E. PARCHEN	Contact/Requester Dot Stewart
SAF No. S07-012	Sampling Origin Hanford Site
Project Title SURV, DECEMBER 2006	HWF-W-506.
Shinned To (Lab)	Method of Shipment
Severn Trent Incorporated Richland	Govt Vehicle

C.O.C.#

. 0	0050	87	<u>'</u>			CHAI	N OF (CUSTODY	SAMPLE ANALYSIS .	REQUEST	·	S	00/-014	-400	
Due	02.1	16 -	07									Page	<u>1</u> of	1	
Collector	Fluor H D. E. P.	lanfor	rd				Contact/Re Dot Stew			Telephone No. 509-376-5056	MSIN	[F.	AX		
SAF No. S07-012							Sampling C Hanford	Origin		Purchase Order/	Charge Code	HECONOMIC TO THE PARTY OF THE P			
Project Title SURV, DECEMI	DED 2006							-N-506-	- /	Ice Chest No.	2055	Temp.	***************************************		
Shinned To (Lah)		Minimalyminarconics		Anna soine aussens a	Materialistical	Sancare Committee survey constructive de constructive	Method of	Shipment	Manual Control of the	Bill of Lading/Ai	r Bill No.	2			
Severn Trent Inco Protocol	ornorated. Ric	<u>hland</u>	Marchischen und Arther der State (State (Sta	edestation a territoria	aniolinis/Nondoleside		Govt. Ve	*****		Offsite Property		****			
SURV	r E ri e e e e e e e e e e e e e e e e e e		D.C. D.C.C.					Pric	ority: 45 Days						
** ** Contains Rad releasable per DOE Ord	lioactive Materia	al at con	ncentrations that	: are no	ot regulat	ted for transpo	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS Ho All Labs except WSCF: Batch all PNNL sam closure of 14 days. WSCF: Batch all PNNL GW samples submitt		G, I, S, and W 07 S	AFs into one S	ion: Yes ✓ SDG, not to exc	No Laced SDG	
Sample No.	Lab ID	*	Date	Т	ime	No/Type	Container		Sample Analysis			·	Preservative		
B1LD92		W	1-2-07	10	37	1x20-mL		Activity Scan			None				
B1LD92		W				1x1000-r		1	A_GPC: Alpha + Beta (2)		HNO3 to pH <2				
B1LD92		W		<u> </u>		1x500-m		TC99_ETVDSK_L			HCl to pH <2				
B1LD92		W				1x1000-r		906.0_H3_LSC: T			None				
B1LD92		W	4	-54	<u>+ </u>	1x500-m	ıL G/P	UTOT_KPA: Uran		HNO3 to pH <2	INO3 to pH <2				
				<u> </u>					JMELT	7	***************************************				
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Relinquished By Print Sign Date/ Fluor Hanford D. E. PARCHEN JAN 0.2								Recorved By .	Seint Smill Sign	Date/Time /34 \ JAN 02 2007 s			Matrix * S = Soil DS = Drum Soil		
Relinquished By Date/Time						Date/1	Time	Received By Date/Time			SE = SO = SL =	Sediment Solid Sludge Water	DI. = T = WI =	Drum Liqui Tissue Wine Liquid	
Relinquished By						Date/1	Гime	Received By		Date/Time		Oil Air		Vegetation Other	
Relinquished By						Date/1	Time	Received By		Date/Time					
FINAL SAMPLI DISPOSITION		Method	l (e.g., Return to	custor	ner, per	lab procedure	e, used in proce	ess)	Disposed By		ent with a constant of the con	Date/Ti	ime		



Sample Check-in List

		01-02-07 1345					
Client	Pow	SDG #: 4065	5087 NA[] SA	F#: 807-6	12 N	ΙΔ ()	
		174040214	Chain of Custody #				(577)
		ROSS	Air Bill #N/A		140,	112/11	
1.	Custody Seals o	n shipping container intact?		NA[] Yes	1 No 1 1		
2.	Custody Seals d	ated and signed?		NA() Yes			
3.	Chain of Custod	y record present?		*	/ No[]		
4.	Cooler températ	ure:NAM 5.	Vermiculite/packing n	raterials is N		1 Drv (1	
6.	Number of samp	les in shipping container:	Gor		X 7 9((1-17()	
7.		times exceeded?		NA [Yes] No[]		
8.	Samples have:tapecustody se	als .	hazare				
9.	Samples are:in good cobroken		leakin have a Only for sa	g ür bubbles mples requiri		ice)	
10.	Sample pH taken	? NA[] pH<2	1) pH>2/1 pH	L>9 []			
11.	Sample Location *For documentat	, Sample Collector Listed? *ion only. No corrective acti	on needed.	Yes	M No[]		
12.		ies identified in sample rece		Yes	[] No [/		
13.	Description of an	Omalies (include sample nur	nbers): <i>W//}</i>		Annual Company forms around a lightly of speed high the processing control and control	THE SECOND SECOND	
Sample	Custodian:	Smith	Date: 01-0.	2-07	134	The second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a section in the section in the section is a section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section in the section is a section in the secti	
Clie	nt Sample]D	Analysis Requested	Condition	and the state of t	omments/Act	AND REAL PROPERTY AND INC.	
					dem alterna de la descripción de la compansa de la compansa de la compansa de la compansa de la compansa de la		
Client Inf	ormed on	by	Person contact	ed	manage publica groups d'Adeningen a 1964 à suit group (Ad. 1920) a	27 (A) A - (A)	
	ction necessary; pro			of Philosope minds are sent	enter total più dessa del cabillatique que pe Personne y calvidant e	Mary and Mary 11 day 19	
roject M	anager		Date				
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PNNL J77A04023	ス
W05087 Due 02-16-6	27

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

S07-012-526

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Collector				******		Contact/Re		MMMmara		Telephone No. 509-376-5056	dephone No. MSIN FAX 509-376-5056			
SAF No. S07-012						Sampling O Hanford S	Prigin			Purchase Order				
Project Title SURV, DECEMBE	ER 2006						-N-506 3			Ice Chest No.	4-022	Temp.		
Shinned To (Lah) Severn Trent Incom	indoles viene kolonie kolonsyna kolonie za obrasila za obrasila za obrasila za obrasila za obrasila za obrasila	hland				Method of S Govt. Vel	Shipment			Bill of Lading/A	ir Bill No.			`
Protocol SURV							Pric	ority: 45 Days		Offsite Property	No.			
POSSIBLE SAMPLI ** ** Contains Radio releasable per DOE Order	active Materia	l at con	centrations that	are not regula	ted for transpo	ortation per 49	CFR but are not	closure of 14 day	WSCF: Batch all PNNL samp		, G, I, S, and W 07 S	vity Exemption: AFs into one SDG		
Sample No.	Lab ID	* -	Date	Time	No/Type	Container			Sample Analysis			Pre	servative	
B1LC42		W	1-2-07	1030	1x20-mL	Р	Activity Scan				None			
B1LC42		W	<i>V</i>	. V	2x4000-r	nL G/P	I129LL_SEP_LEF	S_GS_LL: I-12	9 (1)	****	None		vi	
							MHH.	MANUAL TARREST TO THE PARTY OF	JM	E 95				
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Relinquished By Print Sign Date/Time H						Time / 4	Received By	Print	Sm i Th	JAN 0 2 20	1415	Matrix	*]
Relinquished By		. 10	1000		Date/	ZUU/ Time	Received By	<u>h</u>).	SMITT	Date/Time	SE = SO =	Soil Sediment Solid	DS = D DI. = D T = Ti	mm Liaui issue
Relinquished By					Date/	Time	Received By	***************************************		Date/Time	W =	Sludge Water Oil Air	WI = W I. = I.i V = V X = O	ionid Tegetation
Relinquished By				****	Date/	Гіте	Received By			Date/Time				
FINAL SAMPLE DISPOSITION	Disposal N	Method	(e.g., Return to	customer, per	lab procedure	e, used in proce	ess)	THE STATE OF THE S	Disposed By	1100	•	Date/Time	- 1 - ANEWS	

PNNLJ TA	0403 050	332	7		CHAIN OF	CUSTODY/	1	C.O.C.# S07-012-532					
dlu	02.10	00	7							Page $\underline{1}$ of $\underline{1}$			
Collector		***************************************	7		Contact/Re			Telephone No. 509-376-5056	MSIN	FAX			
SAF No.					Dot Stew Sampling (Purchase Order					
S07-012 Project Title					Hanford		- The second sec	Ice Chest No.					
SURV. DECEME	BER 2006				HNF	HNT 10 Jee 3				Cemp.			
Shinned To (Lab)	management to the state of the		interiprocessulations/interioristic and interioristic and and interioristic and interioristic and interioristic and inte		PROPERTY CONTRACTOR CO	Method of Shipment Goyt, Vehicle Bill of Lading							
Severn Trent Inco Protocol	ernorated, Ric	hland	CONTROL OF THE CANADA		GOVI. V 6		45 D	Offsite Propert	erty No.				
SURV POSSIBLE SAMPI	V				<u> </u>	Priority: 45 Days SPECIAL INSTRUCTIONS Hold Time Total				v Exemption: Yes 🗹 No			
eleasable per DOE Ord	ler 5400.5 (1990	D/1993)) 		ted for transportation per 45	I	All Labs except WSCF: Batch all PNNL s closure of 14 days. WSCF: Batch all PNNL GW samples sub	•					
Sample No.	Lab ID	*	Date	Time	No/Type Container	A # 17 0	Sample Analysis		T	Preservative			
			1x20-mL P	Activity Scan	20.00		None						
B1LC39 W V	<u> </u>	2x4000-mL G/P	IL G/P I129LL_SEP_LEPS_GS_LL: I-129 (1) None				***************************************						
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Relinquished By	Kind (Wall)	Date/Time /41	1 1 X	inach S-Sm	Sign IA	Date/Time * /	S	Mar = Soil	rix * DS = Drum Sc
Relinquished By		Date/Time	Received By			Date/Time	SE SO SI W	= Sediment = Solid = Sludge = Water	DL = Drum Lic T = Tissue WI = Wine Liquid
Relinquished By		Date/Time	Received By			Date/Time	Ö A	= Oil = Air	V = Vegetation X = Other
Relinquished By		Date/Time	Received By			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to custor	ner, per lab procedure, used in proc	ess)	Dispos	sed By			Date/Tir	ne

Sample Check-in List Date/Time Received: 01.02-07 145

Wor	<			The state of the s
•	k Order Number:	Work Order Number: 074040332	Chain of Custody #	Chain of Custody # 507-012 -532, 526
Ship	Shipping Container ID: AFS-04-022	1FS-04-022	Air Bill # \mathcal{O}/A	
-	Custody Seals on	Custody Seals on shipping container intact?		NA I Yes Z No C
2.	Custody Seals dated and signed?	ited and signed?	Z	NA NA Yes No N
ω.	Chain of Custody record present?	record present?		Yes
4	Cooler température;	and the same of th	'èrmiculite/packing mate	NA JA S. Vermiculite/packing materials is NA JA Wei (1977)
9	Number of sampl	Number of samples in shipping container	2	
7.	Sample holding times exceeded?	imes exceeded?	Z	NA \vec{Z} Yes \square No \square
∞ ²	Samples have: tape custody seals	S1	hazard labels	hazard labels appropriate samples labels
9	Samples are:	idition	leaking have air bubbles (Only for samples requ	leaking have air bubbles (Only for samples requiring head sonce)
10.	Sample pH (aken?	NA() pH<2()	id.	
- grandom Januaraj	Sample Location, *For documentatic	Sample Location, Sample Collector Listed? * *For documentation only. No corrective action needed.	n needed.	Yes No (
12.	Were any anomali	Were any anomalies identified in sample receipt?	jp(?	Z C sex
13.	Description of ano	Description of anomalies (include sample numbers): \mathcal{N}/\mathcal{A}	nbers): N/\mathcal{F}	
	A			dende menumen i indestam sekkiri materi meteratu producit kommon artiska dan terbatariyan diama
Sampl	Sample Custodian:	· Smith	Date: 01-0	01.02.67 1415
D	Client Sample 1D	Analysis Requested	Condition	Comments/Action
Client I	Client Informed on	by	Person contacted	
% []	[] No action necessary; process as is.	.ess as is.		
Project	Project Manager	A the standard of the standard	Date	

PNNLJ714040240	
Due 02.16-07	
Nue 02.16-07	

CHAIN OF CHETODY/SAMDLE ANALYSIS DECHEST

C.O.C.#

A07-012-14

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Drie	W0502 02.16	~ (7									Page	$\frac{1}{2}$ of $\frac{1}{2}$	
Collector		****				Contact/Re				Telephone No.	MS	SIN	FAX	
SAF No.	VALL.					Dot Stew Sampling (509-376-5056 Purchase Order	Charge Code			
A07-012 Project Title						Hanford				Ino Chart No		Temp.		
LLWMA(1)-PA.	DECEMBER	2006					NFN-5063			Ice Chest No.	04022	_ remp.		
Shinned To (Lab) Severn Trent Inc		blond				Method of Govt. Ve			ľ	Bill of Lading/A	r Bill No.			
Protocol Other		102110			nicesta, esta esta escenia de Principalmente	JOVI. VC		ority: 45 Days		Offsite Property	No.			
POSSIBLE SAME ** ** Contains Rac releasable per DOE On	dioactive Materia	l at cor	ncentrations that	are not regulat	ed for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all I closure of 14 days. WSCF: Batch all PNNL GW samp	r	s submitted under A	G, I, S, and W 0		otion: Yes 🗹 :	
Sample No.	Lab ID	*	Date	Time	No/Type	: Container		Sample A	nalysis				Preservative	
B1LJT1		W	1-3-07	1316	1x20-ml	- P	Activity Scan				None			
B1LJT1		W	1	1	1x500-m	ıL P	TC99_ETVDSK_L	SC: Tc-99 (1)	-		HCl to pH <2			
B1LJT1		W	V.		1x500-m	ıL G/P	UTOT_KPA: Uran	iium (1)			HNO3 to pH ·	<2		
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Relinquished By	Print	ν_{I}		VI / .	Date/ AN N 3		Received By	Print Sign	2 & 2	Date/Time/		Ŋ	Matrix *	
Lessa VVA	<u> </u>	/ 10	<u> </u>	W J			A-mil	n 3-8mm	IAL	V 0 3 2007	S	= Soil = Sediment	DS = D	
Relinquished By	•				Date/	Time	Received By			Date/Time	SO	= Solid	$ DI = D \\ T = Ti $	issue
					~			, · · · · · · · · · · · · · · · · · · ·			w	= Sludge = Water		iauid
Relinquished By					Date/	ıme	Received By			Date/Time		= Oil = Air	$V = V_0$ $X = O_0$	egetation other
Relinquished By			.,.,		Date/	Time	Received By	100000000000000000000000000000000000000	TW. ************************************	Date/Time	<u> </u>		•	VIIII 2
FINAL SAMPL DISPOSITION		Method	I (e.g., Return to	customer, per	lab procedur	e, used in proc	ess)	Disposed By			-	Date/	Time	· · · · · · · · · · · · · · · · · · ·

PNNL J7A040340
W05087
NO 5087

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#

A07-012-10

Due	02-16	.07										Page	<u>1</u> of	1
Collector D. M.	ALL				C	Contact/Re			74444444	Telephone No. 509-376-5056	MSI	N FA	X	
SAF No.			AMERICA		S	ampling C)rigin			Purchase Order/	Charge Code		-	
A07-012 Project Title						Hanford S		× >		Ice Chest No.	Pe 211 0	Temp.		
LLWMA(1)-PA. D	ECEMBER :	2006				1ethod of S	+NF-N-500	25						
Severn Trent Incom	orated Rich	land				Govt. Ve				Bill of Lading/Ai	r Bili No.	1.52		
Protocol Other							Pric	ority: 45 Days		Offsite Property	No.			
** ** Contains Radios eleasable per DOE Order	ictive Material	at conce		are not regulate	ed for transport	ation per 49	CFR but are not	closure of 14 days	VSCF: Batch all PNNL sam		G, I, S, and W 07 S	ivity Exemption SAFs into one SE	n: Yes VG, not to ex	No Cocced SDG
Sample No.	Lab ID	*	Date	Time	No/Type C	Container			Sample Analysis		,	P	reservative	e
B1LJR9		W	307	1222	1x20-mL	Р	Activity Scan				None			
B1LJR9		W		- Constant	2x4000-m	L G/P	I129LL_SEP_LEF	PS_GS_LL: I-129	9 (1)		None			
B1LJR9		W	V	V	1x500-mL	G/P	UTOT_KPA: Urar	nium (1)			HNO3 to pH <2			
									JMER	P		***************************************		

						***************************************		www			***************************************			

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Relinquished By	Print		I, W	W	JARatecTi	I 2007	Received By	45	Smith	JAN Pate Ting		Mat		D
Relinquished By	- V				Date/Ti	me	Received By			Date/Time	SE = SO =		DI. = T =	Drum Solid Drum Liqui Tissue
Relinquished By	35599441644		***************************************		Date/Ti	me	Received By			Date/Time	W =	Sludge Water Oil Air	V =	Liquid Vegetation Other
Relinquished By				***************************************	Date/Ti	me	Received By	***************************************		Date/Time		,		
FINAL SAMPLE DISPOSITION	Disposal N	1ethod (e	e.g., Return to	customer, per	lab procedure,	used in proce	l ess)		Disposed By		WHITE E CO. A. C.	Date/Tim	e e	



Sample Check-in List

Client:	Pow	SDG #: W03	5087 NA[] S	AF#: A	07-012 NACE
Work (Order Number: V 7	14040340			7-012-10,14
Shippin	ng Container ID: A	F5-04-022	Air Bill # N/A		
1.	Custody Seals on	shipping container intac	•		Yes // No[]
2.	Custody Seals dat	ed and signed?			Yes () No ()
3.	Chain of Custody	record present?			Yes [] No []
4.	Cooler températur	e:NA []/ 5	Vermiculite/packing	material	
6.	Number of sample	es in shipping container:	2	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2 to 13 V M. Met () Dth
7.	Sample holding ti		,	- NA 18	Yes[] No[]
8.	Samples have:tapecustody seal	\$.	haza appr	rd labels	
) .	Samples are:in good conductionbroken	dition	leaki have	ng air bubt	
10.	Sample pH taken?	NA[] pH<	2 () pH>2 () p		. , ,
1.	Sample Location, S *For documentation	Sample Collector Listed? n only. No corrective ac	<i>!</i> *		Yes / No[]
2.	Were any anomalie	es identified in sample re	ceipt?		Yes[] No [/
3.	Description of another	malies (include sample n	umbers): NJA		() 110 /)
-	Custodian: J	Smirk	Date: 01	03.0	7 1505
Clier	nt Sample ID	Analysis Requested	Condition		Comments/Action
lient Info	ormed on	by	Person contac	cted	
	ction necessary; proce			А.В.В. чен тр. чилара и	

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PNNL (T2	A040	31	10 88	•					· · ·			C.O.C. #	C07 01	26
PNNL 77	W050	87	7		פייינה	CHAI	N OF (CUSTODY/	SAMPLE ANALYS	IS REQUEST	`		G07-012	
	N	ue	02 -16	0								Page	<u>1</u> of <u>1</u>	
Collector VV/	and them bear						Contact/Re Dot Stew			Telephone No. 509-376-5056	MSIN	IF.	AX	and desired
SAF No.							Sampling C			Purchase Order	Charge Code			
G07-012 Project Title					*******		Hanford 3	_		Ice Chest Nos		Temp.		
1NR2-RB, DECE Shipped To (Lab)	EMBER 2006						HNY Method of:	-N-5063		Ice Chest Nog				
Severn Trent Inco	ornorated, Ric	hland					Govt. Ve			Bill of Lading/A	r Bill No.			
Protocol SURV								Pric	rity: 45 Days	Offsite Property	No.			
POSSIBLE SAMP ** ** Contains Rad releasable per DOE Ore	ioactive Materia	l at cor	centrations that	are no	t regula	ted for transpo	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNN closure of 14 days. WSCF: Batch all PNNL GW samples:		G, I, S, and W 07 S		ion: Yes 🗹 N SDG, not to exceed	
Sample No.	Lab ID	*	Date	Ti	ime	No/Type	Container	,	Sample Analy	sis			Preservative	
B1LJX0		W	1-3-07		()¥	1x1000-r	mL P	906.0_H3_LSC: T	ritium (1)		None			
B1LJX0		W			V	1x1000-r	nL P	9310_ALPHABET	A_GPC: Alpha + Beta (2)		HNO3 to pH <2			
B1LJX0		W	San San San San San San San San San San			1x20-mL	Р	Activity Scan			None			-
B1LJX0		W			Acceptance	1x4000-r	nL G/P	GAMMALL_GS: L	ist-1 (9)	The state of the s	HNO3 to pH <2	***************************************		***************************************
B1LJX0		W	Y	Ý	/	3x1000-r	mL G/P	SRISO_SEP_PRE	CIP_GPC: Sr-90 (1)		HNO3 to pH <2			
									JMETL	31999999999999999999999999999999999999			· · · · · · · · · · · · · · · · · · ·	
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Relinquished By	Print	9-7	Silven	\mathcal{M}	+	Date/	Time / 5 /	Received By	Print Sign	Date/Time	595	M	atrix *	
L.D. WA			1.110	八			3 2007	J. Sm. Y		IAMA		IVI	auix ·	
Relinquished By	$- \mathcal{G}$		/1000	<u>~_</u>		Date/		Received By	370/11-0	Date/Time	SE =	Soil Sediment		nm Solid um Liqui
												Solid Sludge	T = Tis $WI = Wi$	
Relinquished By						Date/	Γime	Received By	***************************************	Date/Time		Water Oil	I. = I.ia V = Ve	ouid egetation
												Air	X = Oth	
Relinquished By	***************************************		P		-	Date/	Time	Received By		Date/Time				***************************************

FINAL SAMPLI DISPOSITION		1ethod	(e.g., Return to	custon	ner, per	lab procedure	, used in proce	ess)	Disposed By			Date/T	ime	

			3, ,	7							C.O.C.#		
PNNL T 7 Oue Collector	A040	つみ	40 153	j	CHAI	N OF	CUSTODY/	SAMPLE ANALYS	SIS REQUES	Γ	3	G07-012-	70
Dul	02-16	.0%	7								Page	<u>1</u> of <u>1</u>	
Collector				,		Contact/Ro		Address of the second of the s	Telephone No.		SIN F	AX	
SARNOJ - W	ALLE			- 444.492		Dot Stew Sampling (509-376-505 Purchase Orde				
G07-012						Hanford							
Proiect Title 1NR2-RB, DEC	EMBER 2006					HIVE	-N-5063		Ice Chest No.	4PS-04-	OZŽ Temp.		
Shinned To (Lah)		ecatologico constalicios				Method of	Shipment		Bill of Lading/	Air Bill No.			
Severn Trent Inc Protocol	cornorated. Ric	hland		ekonomikasi kanada da	esta contractor de contractor de vecesar	Govt. Ve		A = -	Offsite Propert	v No.			
SURV							Pric	ority: 45 Days					
** ** Contains Rac releasable per DOE On	dioactive Materi	al at co	ncentrations tha	t are not reg	ulated for transp	ortation per 49	CFR but are not	SPECIAL INSTRUCTIONS All Labs except WSCF: Batch all PNI closure of 14 days. WSCF: Batch all PNNL GW samples		A, G, I, S, and W	Activity Exempt 07 SAFs into one	tion: Yes 🗹 No SDG, not to exceed	SDG
Sample No.	Lab ID	*	Date	Time	No/Type	Container		Sample Anal	ysis			Preservative	
B1LJW0		w	1-3-07	11015	1x1000-	mL P	906.0 H3 LSC: T	Fritium (1)		None	<u> </u>		
B1LJW0	1	w	1 1	107	1x1000-	mL P	9310_ALPHABET	「A_GPC: Alpha + Beta (2)		HNO3 to pH	<2		
B1LJW0		l w			1x20-mL		Activity Scan			None			
B1LJW0		W		3	1x4000-	nL G/P	GAMMALL_GS: L	_ist-1 (9)		HNO3 to pH	<2		
B1LJW0		W	1		3x1000-	mL G/P	SRISO_SEP_PRI	ECIP_GPC: Sr-90 (1)		HNO3 to pH	<2		
		1							***************************************		***************************************		
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Relinquished By	Print), Wal		JAN 0 3	Time / 3 &	Received By	Je Sign	JAN 0 3 20	1345	M = Soil	atrix *	m Solid
Relinquished By					Date/	Гіпе	Received By		Date/Time		= Sediment = Solid = Sludge = Water	DI. = Drur T = Tisss WI = Win L = Liqu	m Liaui ne ne
Relinquished By					Date/	Гime	Received By		Date/Time		= Oil = Air	V = Vega X = Othe	etation
Relinquished By					Date/	Time	Received By		Date/Time				

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By

Date/Time



Sample Check-in List

		1-03-07 15			
Clier	nu Pou	SDG II: WC	05087 _{NA[]}	SAF#:6	-07-012 NAM
Wor	k Order Number: 🗸	1719040243			7-012-70,6
Ship	ping Container ID:	AF5-04-022			
1.	Custody Seals	on shipping container into			Yes [No[]
2.	Custody Seals	dated and signed?		NA ()	Yes (/ No[]
3.	Chain of Custo	dy record present?			Yes // No[]
4.	Cooler tempéra	ture:NA ()	5. Vermiculite/pack	ing material	
6.	Number of sam	ples in shipping container	2		· · · · · · · · · · · · · · · · · · ·
7.	Sample holding	times exceeded?		NAI	Yes[] No[]
8.	Samples have:tapecustody s	eate	h	azard labels	
9.	Samples are:in good co	ondition	lo	eaking ave air bubb	amples labels ples equiring head space)
10.	Sample pH take	n? NA[] pF	H<2 [/ pH>2 [/		, ,
11.	Sample Location *For documenta	n, Sample Collector Lister tion only. No corrective	d7 *		Yes [] No []
12. 13.		ilies identified in sample i			Yes[] No[/
	Describation of au	normalies (include sample	numbers): \mathcal{O}/\mathcal{F}	and a constitution of the second between the second between the second s	
Sample	e Custodian:	· Smith	Date: 6	1-03-1	7 1505
CI	ient Sample ID	Analysis Requested	Conditio		The state of the s
					Comments/Action
Olient L	nformed on	by	Person co	macted .	
	action necessary; pr				
roject i	Manager		Date	and the second section of the section of the second section of the second section of the section of the second section of the sectio	
S-023.	9/03. Rev. 5				

1/24/2007 10:47:32 <i>F</i>	λM		S	Sample Prep	aration/Ana	alysis		Balanc	e ld:1120482733	
384868, Pacific Northy Pacific Northwest Nation				lipha PrpRC5014 lipha by GPC us		m.		Pi	pet #:	
AnalyDueDate: 02/1				apna by GPC us : HANFORD	mg Am-241 cu	rve		Sep1 DT/Tm 1	Гесh:	
	WATER	うちつちつ pCi/L		PM, Q	uote: SA , 57	671		 Sep2 DT/Tm 1		
SEQ Batch, Test: None		• • •		,				_	ì	
									Гесh: BockJ / ДРР	+
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Trad Prep Da		Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JMEFC-1-AA		109.10g,in			0	·50	100	1809	1/30/0704)
J7A040186-1-SAMP	1 2 1 1 50 2 12			7	47.9	, 100) 100	700 (/ 0 - / 1	
01/02/2007 11:29	THE PARTY OF THE P	AmtRec: 20M	L,LP	#Containers: 2			Scr:	Alpha: -2.71E-05 uCi	//Sa Beta: 1.	.53E-04 uCi/Sa
2 JMEL7-1-AC		172.30g,in							110	6.
J7A040214-1-SAMP				gs.lot.even/Mis E	44.9	150	NA	1437	1/3/1/20	
01/02/2007 10:37		AmtRec: 20M	L,2X500ML,2XL	_P #Containers: 5		**************************************	Scr:	Alpha: -3,41E-04 uCi	/Sa Beta: 7.	.41E-04 uCi/Sa
3 JMEME-1-AC		173.20g,in			1178		2.0			
J7A040214-2-SAMP	s bodilet win				47.0	50	103			
01/02/2007 11:34	Manager and Manage	AmtRec: 20M	L,2X500ML,2XL	.P #Containers: 5			Scr:	Alpha: 3.53E-04 uCi	/Sa Beta: 2.	.58E-08 uCi/Sa
4 JMEMG-1-AC		201.10g,in			111					
J7A040214-3-SAMP	: 010 88 813				46.9	80	NC	- Vernamental		
01/02/2007 12:36	ACCOUNTS OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	AmtRec: 20M	L,2XLP	#Containers: 3			Scr:	Alpha: 5.80E-04 uCi	/Sa Beta: -3	:.76E-04 uCi/Sa
5 JMEMH-1-AA		172.90g,in		7	41.2	***			***************************************	
J7A040214-4-SAMP					71.0	150	ND			
01/02/2007 09:42		AmtRec: 20M	L,2X500ML,LP	#Containers: 4		And the state of t	Scr:		/Sa Beta: 7.	.05E-05 uCi/Sa
6 JMER9-1-AC		192.70g,in								The second secon
J7A040243-1-SAMP					40.9	150	NF	, ,		
01/03/2007 10:15	Parameter Company of the Company of	AmtRec: 20M	L,5XLP,4LP	#Containers: 7		TO THE REAL PROPERTY OF THE PR	Sor:	Alpha: 5.06E-03 uCi/Sa	3.2E-01L Beta: 8.12E-	-03 uCi/Sa 1.0E-01L
7 JMETL-1-AC		192.00g,in			- /	in) //	2 11 40	1/2 /	
J7A040243-2-SAMP				<u> </u>	1 42.6	A.2.	10 (B 1600	/30/07000	
01/03/2007 11:04	Management of the control of the con	AmtRec: 20M	L,5XLP,4LP	#Containers: 7		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Scr:	Alpha: 5.02E-03 uCi/Sa	3.2E-01L Beta: 3.	.81E-03 uCi/Sa
									180000000000000000000000000000000000000	
-		fi - Final Amt, di - Dilut		•	Page 1	ISV	- Insufficient Vo	lume for Analysis		VO Cnt: 7
Richland Wa.	pd - Prep Dt, r - F	Reference Dt, ec-Enrich	ment Cell, ct-	-Cocktailed Added					Prep_	SamplePrep v4.8.2

1/24/2007 10:47:33 AM Sample Preparation/Analysis Balance Id:1120482733 384868. Pacific Northwest National Laboratory . AZ Gross Alpha PrpRC5014 Pipet #: Pacific Northwest National Lab S7 Gross Alpha by GPC using Am-241 curve **5I CLIENT: HANFORD** Sep1 DT/Tm Tech: AnalyDueDate: 02/16/2007 Batch: 7008351 PM, Quote: SA, 57671 WATER pCi/L Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: .BockJ Work Order, Lot, QC Tracer Dish Count Total Initial Aliquot Ppt or Detector Count On | Off CR Analyst. Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min (24hr) Circle Init/Date 8 JMETL-1-AG-X 193.80q,in 1/30/0700 1600 J7A040243-2-DUP 01/03/2007 11:04 AmtRec: 20ML,5XLP,4LP #Containers: 7 Scr: Alpha: 5.02E-03 uCi/Sa 3.2E-01L Beta: 3.81E-03 uCi/Sa 9 JMJM0-1-AA-B 201.40q,in 1809 J7A080000-351-BLK AmtRec: Scr: 01/03/2007 11:04 #Containers: 1 Alpha: Beta: 10 JMJM0-1-AC-C 202.00g,in ASD4111 0,6 10A 01/18/07.pd J7A080000-351-LCS 02/09/06.r 01/03/2007 11:04 AmtRec: #Containers: 1 Scr: Alpha: Beta: Comments: JMEFC-SAMP "Comments. Aliquots reduced due to weight screen activity. JB 01/24/07" JMER9-SAMP Comment PH LZ.0 981-24-07 170 collodion added to ea. samp. 1/30/07 APA All Clients for Batch: 384868, Pacific Northwest National Laboratory Pacific Northwest National Lab. SA, 57671 JMEFC1AA-SAMP Constituent List: ALPHA RDL:3.00E+00 pCi/L LCL: TICL: RPD: JMJM01AA-BLK: ALPHA RDL:3 pCi/L LCL: UCL: RPD: JMJM01AC-LCS: Am-241 RDL: pCi/L LCL:70 UCL:130 RPD:20 JMEFC1AA-SAMP Calc Info: Uncert Level (#s):: 2 Decay to SaDt: Y Blk Subt .: N Sci.Not.: Y ODRs: B JMJM01AA-BLK: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B JMJM01AC-LCS: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt .: N Sci.Not.: Y ODRs: B STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ISV - Insufficient Volume for Analysis WO Cnt: 10 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep SamplePrep v4.8.26 Richland Wa.

1/24/2007 10:47:34	AM	WHITE WAS A CONTRACT OF THE STATE OF THE STA			aration/An		Balance Id:1120482733				
			Z Gross Alpha I 7 Gross Alpha I			rve		Pi	oet #:		
AnalyDueDate: 02	/16/2007		5I CLIENT: HAN					Sep1 DT/Tm 1	ech:		
Batch: 7008351 SEQ Batch, Test: None	e	pCi/L						Sep2 DT/Tm 1	ech:		
, , , , , , , , , , , , , , , , , , , ,								Prep 1	ech: ,BockJ		
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
					Approve	d By			Date:		
•											
÷											
STL Richland Ke	y: In - Initial Amt,	fi - Final Amt, di - Dilute	ed Amt, s1 - Sep1, s	s2 - Sep2	Page 3	ISV -	Insufficient Vo	lume for Analysis	V	VO Cnt: 10	

Prep_SamplePrep v4.8.26

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Richland Wa.

Sample Preparation/Analysis 1/24/2007 10:36:18 AM Balance Id:1120482733 384868, Pacific Northwest National Laboratory, Pipet #: 235 BC Gross Beta PrpRC5014 Pacific Northwest National Lab S8 Gross Beta by GPC using Sr/Y-90 curve AnalyDueDate: 02/16/2007 650 5I CLIENT: HANFORD Sep1 DT/Tm Tech: Batch: 7008352 WATER PM. Quote: SA . 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,BockJ / APA QC Tracer Work Order, Lot, Total Initial Aliquot Dish Ppt or Count Detector Count On | Off CR Analyst. Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min (24hr) Circle Init/Date 1 JMEL7-1-AD 189.30g,in 79.0 J7A040214-1-SAMP AmtRec: 20ML.2X500ML.2XLP #Containers: 5 Scr: Alpha: -3 41E-04 uCi/Sa Beta: 7.41E-04 uCi/Sa 2 JMEME-1-AD 201.00q,in 75.4 J7A040214-2-SAMP 01/02/2007 11:34 AmtRec: 20ML.2X500ML.2XLP #Containers: 5 Alpha: 353E-04 uCi/Sa Beta: 2.58E-08 uCi/Sa 3 JMEMG-1-AD 200.50a.in (5.4 J7A040214-3-SAMP 01/02/2007 12:36 AmtRec: 20ML,2XLP #Containers: 3 Scr: Alpha: 5.80E-04 uCi/Sa Beta: -3.76E-04 uCi/Sa 4 JMEMG-1-AE-X 201.20g,in 66.7 XD J7A040214-3-DUP 01/02/2007 12:36 AmtRec: 20ML.2XLP #Containers: 3 Scr: Alpha: 5.80E-04 uCi/Sa Beta: -3.76E-04 uCi/Sa 5 JMEMH-1-AC 201.90g,in 84.1 J7A040214-4-SAMP 01/02/2007 09:42 AmtRec: 20ML,2X500ML,LP #Containers: 4 Scr: Alpha: 1.09E-04 uCi/Sa Beta: 7.05E-05 uCi/Sa 6 JMER9-1-AD 100.00g,in 78.8 28A 1656 J7A040243-1-SAMP 01/03/2007 10:15 AmtRec: 20ML.5XLP.4LP #Containers: 7 Scr: Alpha: 5.06E-03 uCi/Sa 3.2E-01L Beta: 8.12E-03 uCi/Sa 1.0E-01L 7 JMETL-1-AD 201.00a.in J7A040243-2-SAMP 01/03/2007 11:04 AmtRec: 20ML,5XLP,4LP #Containers: 7 Scr: Alpha: 5.02E-03 uCi/Sa 3.2E-01L Beta: 3.81E-03 uCi/Sa Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 STL Richland Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 Prep_SamplePrep v4.8.26 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

1/24/2007 10:36:20 AM			San	nple	Prepara	tion/An	alysis			Balance Id	:1120482733	
AnalyDueDate: 02/16/2007			BC Gross Beta S8 Gross Beta 5l CLIENT: HA	by GP	C using Sr	/Y-90 cur	/e		Sep1 D	Pipet # T/Tm Tech		
Batch: 7008352	pC	i/L				***************************************	, Names		- Sep2 D	T/Tm Tech	ı:	
SEQ Batch, Test: None				B 1	1 W W 1 I B B B T F					Prep Tech	ı: ,BockJ	
Work Order, Lot, Total	ll Ini	ial Aliquot	QC Tracer		Dísh	Ppt or	Count	Detector	Count On	Off I	CR Analyst,	Comments:
Sample DateTime Amt/Un		mt/Unit	Prep Date			Geometry	Time Min		(24hr) Circ		Init/Date	Commond.
8 JMJM2-1-AA-B	200.	90g,in			is serve	0.2	2/00	. 0./0	1. 0)	10	
J7A080000-352-BLK					1.5	0.2	£00	283	1656	/	30/05	
01/02/2007 12:36		AmtRec:	#Contain	ers: 1	And the state of t			Scr:	A. Comment	lpha:		Beta:
9 JMJM2-1-AC-C	202.	50g,in	BESB2994		V	0-2			THE PROPERTY.		1	
J7A080000-352-LCS			12/21/06,pd 08/08/06,r			0-0	A	280	<i>,</i>			
01/02/2007 12:36		AmtRec:	#Contain	oro: 1				Scr:	Λ	ipha:		Beta:
Comments: JMER9-SAMP "C					**************************************							
All Clients for Batch: 384868, Pacific Northwes	t National 1		<u> </u>		west Natio	***************************************		we. (130)	OT APP		11 1935	
JMEL71AD-SAMP Constituent Li	st:			,		***************************************						
BETA RDL:4 JMJM21AA-BLK:	pCi/L	LCL:	UCL:	RPD:								
BETA RDL:4	pCi/L	LCL:	UCL:	RPD:								
JMJM21AC-LCS: Sr-90 RDL:	pCi/L	LCL:70	UCL:130	RPD:	20							
JMEL71AD-SAMP Calc Info: Uncert Level (#s).: 2 JMJM21AA-BLK:	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.:	Y O	DRs: B					
Uncert Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.:	Y C	DRs: B					
JMJM21AC-LCS: Uncert Level (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N	Sci.Not.:	Y O	DRs: B					
						Anneare	a Dr.				Data.	
						Approve	а ву			***************************************	Date:	
STL Richland Key: In - Initial	Amt, fi-Final	Amt, di - Dilu	ted Amt, s1 - Sep	1, s2 - S	Sep2 Pag	e 2	IS	V - Insufficient Volu	ume for Analv	sis		WO Cnt: 9
			hment Cell, ct-Cod						···· ,		Pre	p_SamplePrep v4.8.26

1/22/2007 9:33:10 AM		Sample Pr	eparatio	n/Analysi	S		Balance lo	1:1120482733	
384868, Pacific Northwest National Pacific Northwest National Lab	Laboratory ,	CL Sr-90 Prp/SepRC500		7 alou in avous	. L.		Pipet	#:	
AnalyDueDate: 02/16/2007		TL Sr-85 by Nal and Sr-9 5I CLIENT: HANFORD	30 by GPC	day ingrow	เก		Sep1 DT/Tm Tecl	n: 1-23-07	91288年
Batch: 7008356 WATER	050871 pCi/L	PM	, Quote: S	A , 57671			Sep2 DT/Tm Tecl	1: 1-30-07	8:24 AM
SEQ Batch, Test: None							Prep Tecl	,	DRM
			ЩЩШ						1 0
Work Order, Lot, Total Sample DateTime Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Tracer Prep Date Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 JMER9-1-AF	1007.00g,in	SRTB14432 \ \ \(\Cappa \)\(\Cappa \)	104	001	(90)			.1 1	
J7A040243-1-SAMP		01/18/07,pd 09/11/06,r \ 9986	1.0	Q3.6p		94	005	194/015	
	YTA16912	0.8296			and the second second	40 72	SIS	1/37/02	
	ĒX:1/3/2006	(72	049	2/162>	
01/03/2007 10:15	AmtRec	: 20ML,5XLP,4LP #Containers: T	7		***************************************	Scr: Alph	na: 5.06E-03 uCi/Sa 3.2	E-01L Beta: 8.12E-	03 uCi/Sa 1.0E-01L
2 JMER9-1-AJ-X	1005.80g,in	SRTB14433 \776		- 4				1/ /	
J7A040243-1-DUP		01/18/07,pd 09/11/06,r \ 19986		23.7	P P P P P P P P P P P P P P P P P P P	37	0793	104/20	
NAME OF THE PROPERTY OF THE PR		0.8886	an ann ann ann ann ann ann ann ann ann			40 7B	0890 063	1/3,100	
	YTA16913 " Ex:1/3/2006	<u> </u>	10 pp pp 12 ye v 40 pp pp 10 pp 1	***************************************		70	0549	0/1/00	
01/03/2007 10:15	AmtRec	: 20ML,5XLP,4LP #Containers:	7		ANICATE PROPERTY.	Scr: Alph	na: 5.06E-03 uCi/Sa 3.2	E-01L Beta: 8.12E-	03 uCi/Sa 1.0E-01L
3 JMETL-1-AF	1004.90g,in	SRTB14434 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	 				0737	61	
J7A040243-2-SAMP		01/18/07,pd 09/11/06,r	te.	23,8		9"	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	104075	
	YTA16914	0,8356	****************			50 7C	95	131/02	
	Y1A16914 \ Ex:1/3/2008				Pws 200776 are facilities	7.4	- 07/6	2/1/00	
01/03/2007 11:04	AmtRed	:: 20ML,5XLP,4LP #Containers:	7		of well-fittings (skippe Female	Scr: Alph	na: 5.02E-03 uCi/Sa 3.2	E-01L Beta: 3.	31E-03 uCi/Sa
4 JMJM6-1-AA-B	999. 90 g,in	SRTB14435 \.505			بادر		_		
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·		Diluted Amt, s1 - Sep1, s2 - Sep nrichment Cell, ct-Cocktailed Add	_		iov - inst	ıfficient Volume	HOLAHAIYSIS		VO Cnt. 4 SamplePrep v4.8.20

1/22/2007 9:33:1	22/2007 9:33:14 AM			S	ample P	reparation	/Analys	is		Balance I	d:1120482733	THE RESERVE TO SERVE THE PROPERTY OF THE PROPE
				CL Sr-90 Pr _l TL Sr-85 by		06(5071) -90 by GPC 7	day ingrov	vth		Pipet	#:	Annual Control of the
AnalyDueDate:	02/16/2007			51 CLIENT:	HANFORD)			\$	Sep1 DT/Tm Tec	h:	
Batch: 7008356 SEQ Batch, Test: N	ano	p(Ci/L	**************************************	WATER AND THE TRANSPORTED TO THE				•	Sep2 DT/Tm Tec	h:	
oLa baton, Test. N	Ji le				111					Prep Tec	h: ,BockJ	
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial /	Aliquot /Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
5 JMJM6-1-AC-C J7A080000-356-LCS	# #11 # # 1 #20 B TV W/b	1000.2	0g,in	SRSG1306 12/20/06,pd 09/11/06,r	.486 0063	de de la companya de	289	100	q"	୧୫୲	6	1124107 2
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01/03/2007 10:15			AmtRec:	#Cor	tainers: 1				Scr:	Alpha:		Beta:
All Clients for 384868, Paci		t National	Laborato	ry Pacif	ic Northwe	est National	Lab, SA	, 57671				
JMER91AF-SAMP Co Sr-85 RD		st: pCi/L	LCL:20	UCL:105	RPD:20	0 sr-9	90 I	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
JMJM61AA-BLK: Sr-85 RD	L:	pCi/L	LCL:20	UCL:105	RPD:20	0 sr-9)O I	RDL:2	pCi/L	LCL:	UCL:	RPD:
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STI Richland	Kov: In - Initial	Amt fi Final	Amt di [Nilutad Amt ed - 9	Cont c2 So	nn? Page ?		ISV - Incuffi	aiant Valuma fa	ar Analysis		WO Cnt: 5

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Richland Wa.

Prep_SamplePrep v4.8.26

1/22/2007	4M		Sam	iple Prep	aration/A	nalysis			Balanc	e Id:1120	482733		
384868, Pacific North			AW Gamma Prpi TA Gamma by F						Pi	pet #:			
AnalyDueDate: 02/			51 CLIENT: HA						Sep1 DT/Tm	Tech:			
Batch: 7008355	WATER)5087 pCi/L		PM, Q	uote: SA , 5	7671			 Sep2 DT/Tm ⁻	Tech:			
SEQ Batch, Test: None	9	•							-		ckJ/AP	A	
			II 66 T				ЩЩЩ	ЩЩ	<u> </u>		,		
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Cour Time N	11	ector d	Count On Off (24hr) Circle		Analyst, /Date	Com	ments:
1 JMER9-1-AE		1952.20g,in			100ml	100) /		:0 0	:/.	00		
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3 JMETL-1-AE		2000.10g,in			No.	The state of the s	1 / 1						
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01/03/2007 11:04	ACCOUNT OF THE PROPERTY OF THE	AmtRec: 20	ML,5XLP,4LP #0	Containers: 7	de Autorio (spriminales sur rel	and province and province		Scr:	Alpha: 5.02E-03 uCi/Sa	3.2E-01L	Beta: 3.8	1E-03 uCi/	Sa
4 JMJM5-1-AA-B		2000.10g,in				And the second s	1 -	`	10 11				
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5 JMJM5-1-AC-C		2000.00g,in	QCAG1326			N	/. 🗸						
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01/03/2007 10:15	MANAGEM 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AmtRec:	#Containe	rs: 1				Scr:	Alpha:			Beta:	
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•	11 6 0 0	PILLE	e de la companya de l										
All Clients for Ba 384868, Pacific		ional Laboratory	Pacific	Northwest 1	National Lab	, SA ,	57671				***************************************		
JMER91AE-SAMP Cons Co-60 RDL:	tituent List: 0.00E+00 pCi	/L LCL:	UCL:	RPD:	Cs-134	RDL	:0.00E+00	pC:	i/L LCL:	UCL:	RPI):	
STL Richland Ke Richland Wa.	•	fi - Final Amt, di - Dili Reference Dt, ec-Enric	•	•	Page 1		ISV - Insuffic	ient Vo	lume for Analysis			O Cnt: SamplePr	5 rep v4.8.26

1/26/2007 9:33:59 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory, BN I-129 Prp/SepRC5025 Pipet #: ____ Pacific Northwest National Lab TB Gamma by LEPD AnalyDueDate: 02/12/2007 🕻 🦫 **5I CLIENT: HANFORD** Sep1 DT/Tm Tech: PM, Quote: SA, 57671 Batch: 7008359 WATER Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,BockJ BOSTEDD Work Order, Lot. Total Initial Aliquot **QC** Tracer Dish Ppt or Count Count On | Off Detector CR Analyst, Comments: Sample DateTime Amt/Unit Amt/Unit Prep Date Size Geometry Time Min ld (24hr) Circle Init/Date 1 JL814-1-AA 3902.10q,in ITA5982 100 01/17/07 J6L290155-1-SAMP 12/28/2006 08:39 AmtRec: 20ML.2X4LP #Containers: 3 Scr: Alpha: 1.25E-03 uCi/Sa Beta: 9.43E-05 uCi/Sa 2 JL814-1-AC-X 3903.40q,in ITA5983 32.4 01/17/07 J6L290155-1-DUP 12/28/2006 08:39 AmtRec: 20ML,2X4LP #Containers: 3 Scr: Alpha: 1.25E-03 uCi/Sa Beta: 9.43E-05 uCi/Sa 3 JMEQA-1-AA 3956.20a.in ITA5985 01/17/07 J7A040232-1-SAMP 01/02/2007 09:17 AmtRec: 20ML.2X4LP #Containers: 3 Scr: Alpha: -2.30E-04 uCi/Sa Beta: 2.07E-03 uCi/Sa 4 JMEQ5-1-AA 3963.20a.in ITA5984 1850 01/17/07 J7A040232-2-SAMP 01/02/2007 10:30 AmtRec: 20ML.2X4LP #Containers: 3 Scr: Alpha: 4.46E-04 uCi/Sa Beta: 1.69E-03 uCi/Sa 5 JMERP-1-AA 3936.80g.in ITA5986 1857 01/17/07 J7A040240-1-SAMP 01/03/2007 12:22 AmtRec: 20ML,500ML,2X4LP #Containers: 4 Scr: Alpha: -3.23E-04 uCi/Sa Béta: 2.30F-03 uCi/Sa 6 JMJM7-1-AA-B 3884.00g,in ITA5987 01/17/07 J7A080000-359-BLK 12/28/2006 08:39 AmtRec: #Containers: 1 Scr: Alpha: 7 JMJM7-1-AC-C 4001.00a.in ISD0720 2042 12/14/06,pd J7A080000-359-LCS 11/17/04.r 12/28/2006 08:39 AmtRec: #Containers: 1 Scr: Alpha: Beta: STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 ISV - Insufficient Volume for Analysis Page 1 WO Cnt: 7 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.26 Richland Wa.

1/19/2007 7:10:59 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory, FP Tc-99 Prp/SepRC5065 Pipet #: Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint Sep1 DT/Tm Tech: 5I CLIENT: HANFORD AnalyDueDate: 02/12/2007 PM, Quote: SA, 57671 Batch: 7008361 WATER Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: .BockJ Work Order, Lot. Total Amt Total Initial Aliquot Adi Alia Amt Count Detector Count On I Off CR Analyst, Comments: (Un-Acidified) Time Min Init/Date Sample Date /Unit Acidified/Unit Amt/Unit Prep Date ld (24hr) Circle 1 JL8W7-1-AA 125.00g,in 125.00g 00 J6L290150-1-SAMP 12/28/2006 11:33 AmtRec: 20ML,500ML #Containers: 2 Scr: Alpha: -1.62E-04 uCi/Sa Beta: 1.57E-04 uCi/Sa 2 JL8W7-1-AC-X 125.20g,in 125.20a J6L290150-1-DUP 12/28/2006 11:33 AmtRec: 20ML.500ML #Containers: 2 Scr: Alpha: -1.62E-04 uCi/Sa Beta: 1.57E-04 uCi/Sa 3 JL8XA-1-AA 125.10g,in 125.10g J6L290150-2-SAMP 12/28/2006 11:03 AmtRec: 20ML,500ML #Containers: 2 Scr: Alpha: 4.70E-05 uCi/Sa Beta: 3.95E-05 uCi/Sa 4 JL8XA-1-AC-S 126.90g.in 126.90q tcsq1757 01/03/07,pd J6L290150-2-MS 01/10/06,r 12/28/2006 11:03 AmtRec: 20ML.500ML #Containers: 2 Scr: Alpha: 4.70E-05 uCi/Sa Beta: 3.95E-05 uCi/Sa 5 JL8XP-1-AA 126.30g,in 126.30g J6L290150-3-SAMP 12/28/2006 09:37 AmtRec: 20ML.500ML #Containers: 2 Scr: Alpha: -1.21E-04 uCi/Sa Beta: 6.89E-05 uCi/Sa 6 JL8XV-1-AA 126.70g,in 126.70g J6L290150-4-SAMP 12/28/2006 10:32 AmtRec: 20ML,500ML #Containers: 2 Scr: Alpha: -1.27E-04 uCi/Sa Beta: 6.89E-05 uCi/Sa 7 JL80T-1-AA 125.20g,in 125.20g J6L290153-1-SAMP 12/28/2006 08:21 AmtRec: 20ML,500ML #Containers: 2 Scr: Alpha: 2.04E-04 uCi/Sa Beta: 7.49E-05 uCi/Sa Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 STL Richland Page 1 ISV - Insufficient Volume for Analysis WO Cnt: 7 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.26 Richland Wa.

1/19/2007 7:11:02 AM Sample Preparation/Analysis Balance Id:1120482733 384868, Pacific Northwest National Laboratory . FP Tc-99 Prp/SepRC5065 Pipet #: Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint 5I CLIENT: HANFORD Sep1 DT/Tm Tech: AnalyDueDate: 02/12/2007 Batch: 7008361 WATER pCi/L PM, Quote: SA . 57671 Sep2 DT/Tm Tech: SEQ Batch, Test: None Prep Tech: ,BockJ Work Order, Lot. Total Adi Aliq Amt Total Amt Initial Aliquot QC Tracer Count Detector Count On | Off CR Analyst, Comments: Sample Date /Unit Acidified/Unit Amt/Unit (Un-Acidified) Prep Date Time Min (24hr) Circle Init/Date 8 JL804-1-AA 125.30g,in 125.30g 60 J6L290153-2-SAMP 12/28/2006 09:21 AmtRec: 20ML,500ML #Containers: 2 Scr: Alpha: -1.92E-05 uCi/Sa Beta: -3.55E-05 uCi/Sa 9 JL809-1-AA 125.60g,in 125.60q J6L290153-3-SAMP AmtRec: 20ML.500ML #Containers: 2 Scr: Alpha: 1.13E-04 uCi/Sa Beta: 5.89E-06 uCi/Sa 10 JL81D-1-AA 126.80a.in 126.80a J6L290153-4-SAMP 12/28/2006 11:04 AmtRec: 20ML.500ML #Containers: 2 Scr: Alpha: 1.30E-04 uCi/Sa Beta: -2.35E-05 uCi/Sa 11 JMEL7-1-AE 125.90g,in 125.90q J7A040214-1-SAMP 01/02/2007 10:37 AmtRec: 20ML,2X500ML,2XLP #Containers: 5 Scr: Alpha: -3.41E-04 uCi/Sa Beta: 7.41E-04 uCi/Sa 12 JMEME-1-AE 125.20g,in 125.20g J7A040214-2-SAMP 01/02/2007 11:34 AmtRec: 20ML.2X500ML.2XLP #Containers: 5 Scr: Alpha: 3.53E-04 uCi/Sa Beta: 2.58E-08 uCi/Sa 13 JMEMH-1-AD 125.40g,in 125.40g J7A040214-4-SAMP 01/02/2007 09:42 AmtRec: 20ML,2X500ML,LP #Containers: 4 Scr: Alpha: 1.09E-04 uCi/Sa Beta: 7.05E-05 uCi/Sa 14 JMERQ-1-AA 125.60g.in 125.60g J7A040240-2-SAMP 01/03/2007 13:16 AmtRec: 20ML.2X500MLP #Containers: 3 Scr: Alpha: -6.55E-05 uCi/Sa Beta: 8.26E-05 uCi/Sa STL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 ISV - Insufficient Volume for Analysis WO Cnt: 14 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep_SamplePrep v4.8.26

1/19/2007 7:1	1:03 AM		Sample Preparation/Analysis							Balance Id:1120482733			
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A. alv D. a Dad	ha. 00/10/0007				ium-99 by Liquio HANFORD	d Scint			Sep1 DT/Tm Te	ch:			
	te: 02/12/2007	»Ci/l		OI OLILIAT.	TAN OND				-				
Batch: 70083 SEQ Batch, Tes		pCi/l	-						Sep2 DT/Tm Te				
									Prep Te	ch: ,BockJ			
Work Order, Lo Sample Date	. 11	Total Acidified/Un		ial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
15 JMJM8-1-AA-B			201	.30g,in	201.30g		60						
J7A080000-361-							1	************					
12/28/2006 11:3	3		AmtRec:	#Co	ntainers: 1			Scr:	Alpha:		Beta:		
16 JMJM8-1-AC-C	,		199	.90g,in	199.90g	TCSE2057	Silver of Co.						
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17 JMJM8-1-AD-B	N												
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12/28/2006 11:3 18 JMJM8-1-AE-B			AmtRec:	#00	ntainers: 1			SUI.	Alpha:		bela.		
J7A080000-361-													
				****	***************************************						**************************************		
12/28/2006 11:3			AmtRec:	#Co	ntainers: 1		3	Scr:	Alpha:		Beta:		
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	011 6 6 6 6	,	•										
All Clients f 384868, P	or Batch: Pacific Northwest	National La	boratory	Pacit	ic Northwest N	Mational Lab,	SA , 57671						
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JMJM81AA-BLK: Tc-99	RDL:15	pCi/L L	CL:	UCL:	RPD:								
TC-99	RDL:15	pCi/L L	CL:70	UCL:130	RPD:20								
STL Richland	Key: In - Initial A	mt fi-Final∆r	nt di-Dilu	ted Amt s1 -	Sen1 s2 - Sen2	Page 3	191/ - 1	Insufficient Volun	ne for Analysis	\	WO Cnt: 18		
Richland Wa.	•				-Cocktailed Added	. ago o	10 0 - 1	volui	10 to Francisco		_SamplePrep v4.8.26		

/8/2007 2:49:19 PM	National Laboratory AP I	Sample Preparatio	on/Analysis			2445
Pacific Northwest National LanalyDueDate: 02/16/200	ab se i	Tritium by Liquid Scint		Sep	Pipet #: o1 DT/Tm Tech:	770 Km
Batch: 7008350 WATE SEQ Batch, Test: None	ER pCi/L	PM, Quote: S		o2 DT/Tm Tech:		
					Prep Tech:	
Work Order, Lot, Sample DateTime	Total Initial Aliquot Amt/Unit Amt/Unit	QC Tracer Count Prep Date Time Mir	Detector	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
I JMEL7-1-AA						
7A040214-1-SAMP						
01/02/2007 10:37	AmtRec: 20ML,2X	500ML,2XLP #Containers: 5		Scr:	Alpha:	Beta:
2 JMEME-1-AA						
7A040214-2-SAMP 	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			***************************************		
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3 JMEMG-1-AA						
7A040214-3-SAMP 	I II			******************		
01/02/2007 12:36	AmtRec: 20ML,2XI	LP #Containers: 3		Scr:	Alpha:	Beta:
I JMER9-1-AA						
7A040243-1-SAMP 	# I II					
01/03/2007 10:15	AmtRec: 20ML,5XI	LP,4LP #Containers: 7		Scr.	Alpha:	Beta:
5 JMER9-1-AG-X					·	
7A040243-1-DUP 	# 					
01/03/2007 10:15	AmtRec: 20ML,5XI	LP,4LP #Containers: 7		Scr:	Alpha:	Beta:
5 JMETL-1-AA						
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7 JMJMX-1-AA-B	, 1111 (O) mo. (Lap.)	i jili nomanisi.			Присс	
7A080000-350-BLK						
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•	itial Amt, fi - Final Amt, di - Diluted A rep Dt, r - Reference Dt, ec-Enrichmen	•	ISV -	- Insufficient Volume for A	nalysis	WO Cnt: 7 ICOC v4.8.

1/8/2007 2:49:22 PM		Sample Pr	eparation/A	nalysis		Balance Id:	2445
·		-3 Prp/SepRC5007				Balance Id: //o Pipet #:	
		ritium by Liquid Sci	nt		Co.	-4 DT/T Tb- 2-2	22-570-
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Batch: 7008350	pCi/L				Se	p2 DT/Tm Tech:	
SEQ Batch, Test: None		1 188	***			Prep Tech:	
Work Order, Lot, Total	Initial Aliquot	QC Tracer	Count	Detector	Count On Off	CR Analyst,	Comments:
Sample DateTime Amt/Unit	Amt/Unit	Prep Date	Time Min	Id	(24hr) Circle	Init/Date	
8 JMJMX-1-AC-C							
J7A080000-350-LCS							
					- 4.4.5.5.5.5.5.5.6.6.6.6.6.6.6.6.6.6.6.6.		
01/03/2007 10:15	AmtRec:	#Containers: 1	Steelbase Steel		Scr:	Alpha:	Beta:
9 JMJMX-1-AD-BX							
J7A080000-350-MBLK							
04/02/2007 10.15	AmtRec:	#O			Scr:	Alpha:	Beta:
01/03/2007 10:15	Amthec:	#Containers: 1			JUI.	Аірпа.	Dela.
10 JMJMX-1-AE-CM J7A080000-350-MLCS							
				~~~			
01/03/2007 10:15	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
11 JMJMX-1-AF-BN							
J7A080000-350-IBLK							
0.000000 0.0000000 0.00000000000000000							
01/03/2007 10:15	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
12 JMJMX-1-AG-BN							
J7A080000-350-IBLK							
		********************************		***************************************			
01/03/2007 10:15	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
Comments:							
All Clients for Batch:	- NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON-SUMMAN - NON						
384868, Pacific Northwest Nat	tional Laboratory	Pacific Northwes	t National La	b, SA, 57671	L		
JMEL71AA-SAMP Constituent List:			7100			man	
	i/L LCL:70 UC	CL:130 RPD:20					
STL Richland Key: In - Initial Amt,	fi - Final Amt, di - Diluted A	mt s1 - Sen1 s2 - Sen2	2 Page 2	ISV -	Insufficient Volume for A	\nalveie	WO Cnt: 12
	Reference Dt, ec-Enrichment				madmoione voidino io	analy 515	ICOC v4.8

1/8/2007 2:49:30 PM

### Sample Preparation/Analysis

AR H-3 Prp/SepRC5007 **S6 Tritium by Liquid Scint 5I CLIENT: HANFORD** 

Balance Id: 12445
Pipet #:
Sep1 DT/Tm Tech: 1-24516m

AnalyDueDate: 02/16/2007

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Batch: 7008350

Prep Tech:

Work Order, Lot, Sample DateTime		11	Initial Aliquot Amt/Unit	11	Tracer Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
JMJMX1AA-BLK:										
H-3 RDL	.:400	pCi/L	LCL:	UCL:	RPD:					
JMJMX1AC-LCS:										
I .	L:400	pCi/L	LCL:70	UCL:130	RPD:20					
JMJMX1AD-MBLK:										
H-3 RDL	4:400	pCi/L	LCL:	UCL:	RPD:					
JMJMX1AE-MLCS:										
E '	4:400	pCi/L	LCL:70	UCL:130	RPD:20					
JMJMX1AF-IBLK:										
1	::400	pCi/L	LCL:	UCL:	RPD:					
JMJMX1AG-IBLK:										
H-3 RDL	:400	pCi/L	LCL:	UCL:	RPD:					
JMEL71AA-SAMP Cal	.c Info:									
Uncert Level	. (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not.: Y	ODRs: B			
JMJMX1AA-BLK:										
Uncert Level	(#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not.: Y	ODRs: B			
JMJMX1AC-LCS:										
Uncert Level	. (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not.: Y	ODRs: B			
JMJMX1AD-MBLK:										
Uncert Level	(#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not.: Y	ODRs: B			
JMJMX1AE-MLCS:										
Uncert Level	. (#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not.: Y	ODRs: B			
JMJMX1AF-IBLK:										
Uncert Level	(#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not : Y	ODRs: B	The second second		1.00
JMJMX1AG-IBLK:		•								
Uncert Level	(#s).: 2	Decay to	SaDt: Y	Blk Subt.:	N Sci.	Not.: Y	ODRs: B			
						Appro	ved By		Date:	

STL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 12

ICOC v4.8.26

ISV - Insufficient Volume for Analysis

1/25/2007 8:02:27 AM		Sample Pro	eparation/A	nalysis	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Balance	ld:1120482733	
384868, Pacific Northwest National Lab Pacific Northwest National Lab	<del>-</del>	aser PrpRC50 anium by KP				Pipe	et #:	
AnalyDueDate: 02/16/2007		HANFORD				Sep1 DT/Tm Te	ch:	
Batch: 7008353 WATER	ug/L 50 ARS6, 7008351 AZS7, 70083		, Quote: SA , 5			Sep2 DT/Tm Te	ch:	
old Baton, 16st. None All 16sts. 76666	00 71100, 7000001 71207, 70000					Prep Te	ch: ,BockJ	
Work Order, Lot, Sample DateTime Total Amt/Unit	11 11	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   (24hr) Circ		R Analyst, Init/Date	Comments:
1 JMEL7-1-AF	26.90g,in							
J7A040214-1-SAMP								
01/02/2007 10:37	AmtRec: 20ML,2X500ML,2XL	_P #Container	s: 5		Scr:	Alpha: -3.41E-04 uCi/S	a Beta:	7.41E-04 uCi/Sa
2 JMEME-1-AF	25.70g,in							
J7A040214-2-SAMP 			~~~~~~	## ## ## ## ## ## ## ## ## ## ## ## ##		***		
01/02/2007 11:34	AmtRec: 20ML,2X500ML,2XL	.P #Container	s: 5		Sor:	Alpha: 3.53E-04 uCi/Sa	Beta:	2.58E-08 uCi/Sa
3 JMEMH-1-AE	25.20g,in							
J7A040214-4-SAMP 				**********		***************************************	***************************************	
01/02/2007 09:42	AmtRec: 20ML,2X500ML,LP	#Containers:	: 4		Scr:	Alpha: 1.09E-04 uCi/Sa	Beta:	7.05E-05 uCi/Sa
4 JMERP-1-AC	26.10g,in							
J7A040240-1-SAMP								
01/03/2007 12:22	AmtRec: 20ML,500ML,2X4LF	P #Containers	:: <b>4</b>		Scr:	Alpha: -3.23E-04 uCi/S	a Beta:∶	2.30E-03 uCi/Sa
5 JMERP-1-AD-X	25.00g,in							
J7A040240-1-DUP								
01/03/2007 12:22	AmtRec: 20ML,500ML,2X4LF	P #Containers	s: 4		Scr:	Alpha: -3.23E-04 uCi/S	a Beta:	2.30E-03 uCi/Sa
6 JMERQ-1-AC	27.10g,in							
J7A040240-2-SAMP		******						
<b></b>	AmtRec: 20ML,2X500MLP	#Containers:	3		Scr:	Alpha: -6.55E-05 uCi/S	a Beta:	8.26E-05 uCi/Sa
7 JMERQ-1-AD-S J7A040240-2-MS	01/2	sf3561 23/07,pd						Military Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of t
	03/	/22/05,r	*********			***************************************	# # # # # # # # # # # # # # # # # # #	
01/03/2007 13:16	AmtRec: 20ML,2X500MLP	#Containers:	3		Scr:	Alpha: -6.55E-05 uCi/S	a Beta:	8.26E-05 uCi/Sa
· · · · · · · · · · · · · · · · · · ·	- Final Amt, di - Diluted Amt, s1 - ference Dt, ec-Enrichment Cell, ct	•	J	ISV -	Insufficient Volum	ne for Analysis		WO Cnt: <b>7</b> _SamplePrep v4.8.26

1/25/2007 8:02:30 <i>A</i>	MA		Sample P		Balance Id:1120482733					
			Nat_Laser PrpRC5 otal Uranium by KF			Pipet #:				
AnalyDueDate: 02/	16/2007		LIENT: HANFORD			Se	p1 DT/Tm Tech:			
Batch: 7008353		ug/L				Se	p2 DT/Tm Tech:			
SEQ Batch, Test: None	)						Prep Tech: ,BockJ			
Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:		
8 JMJM3-1-AA-B		25.20g,in						***************************************		
J7A080000-353-BLK	8 I/ 8 在1乗3 至15									
01/03/2007 12:22	40000000000000000000000000000000000000	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:		
9 JMJM3-1-AC-C J7A080000-353-LCS		25.80g,in	unsf3562 01/23/07,pd 03/22/05,r							
01/03/2007 12:22		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:		
10 JMJM3-1-AD-C J7A080000-353-LCS	8 1K   8 M1 5 M14	25.50g,in	unsc1472 12/18/06,pd 04/28/06,r							
01/03/2007 12:22	60000000000000000000000000000000000000	AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:		
Comments: PH	(Z.0 93	1-25-07								
•	·									
11 Clients for Bat 384868, Pacific	ch: Northwest Nation	nal Laboratory	Pacific Northwe	st National La	b, SA, 57671					
MEL71AF-SAMP Const Uranium RDL: MERQ1AD-MS:	tituent List: 1.44E-01 ug/L	LCL: UC	CL: RPD:		SVA			Michigan Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Compa		

Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD: JMJM31AC-LCS: RDL:0.144343 Uranium ug/L LCL:70 UCL:130 RPD:20 JMJM31AD-LCS: RDL:0.144343 Uranium ug/L LCL:70 UCL:130 RPD:20 JMEL71AF-SAMP Calc Info: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B JMERQ1AD-MS: Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 WO Cnt: 10 Page 2 STL Richland ISV - Insufficient Volume for Analysis

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Richland Wa.

Prep_SamplePrep v4.8.26

1/31/2007 8:51:23 AM

# ICOC Fraction Transfer/Status Report ByDate: 1/31/2006, 2/5/2007, Batch: '7008351', User: *ALL Order By DateTimeAccepting

Q Batch Work	Ord CurStat	us A	ccepting		Comments
7008351					
4C	CalcC	BockJ	1/24/2007 10:30	6:42	
SC		wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC RADCALC v4.8.26
SC		BockJ	InPrep	1/24/2007 10:36:42 AM	rich-rc-5014 rEVISION 6
SC		AshworthA	InPrep2	1/29/2007 12:57:46 PM	RICH-RC-5014 REVISION 6
SC		AshworthA	Prep2C	1/30/2007 1:20:04 PM	RICH-RC-5014 REVISION 6
SC		BlackCL	InCnt1	1/30/2007 1:28:29 PM	RICH-RD-0003 REVISION 4
SC		DAWKINSO	CalcC	1/30/2007 8:49:34 PM	RICH-RD-0003 REVISION 4
4 <i>C</i>		AshworthA	1/29/2007 12:5	7:46	
4C		AshworthA	1/30/2007 1:20:	:04 PM	
4 <i>C</i>		BlackCL	1/30/2007 1:28:	29 PM	
AC		DAWKINSO	1/30/2007 8:49:	:34 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt: 5 ICOCFractions v4.8.26 1/31/2007 8:52:58 AM

# ICOC Fraction Transfer/Status Report ByDate: 1/31/2006, 2/5/2007, Batch: '7008352', User: *ALL Order By DateTimeAccepting

rd CurStat	tus A	ccepting		Comments
CalcC	BockJ	1/24/2007 10:2	8:56	
	wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC_RADCALC v4.8.26
	BockJ	InPrep	1/24/2007 10:28:56 AM	rich-rc-5014 rEVISION 6
	BockJ	Prep1C	1/24/2007 10:36:23 AM	RICH-RC-5014 REVISION 6
	AshworthA	InPrep2	1/29/2007 12:57:52 PM	RICH-RC-5014 REVISION 6
	AshworthA	Prep2C	1/30/2007 1:20:11 PM	RICH-RC-5014 REVISION 6
	BlackCL	InCnt1	1/30/2007 1:28:36 PM	RICH-RD-0003 REVISION 4
	DAWKINSO	CalcC	1/30/2007 8:49:27 PM	RICH-RD-0003 REVISION 4
	BockJ	1/24/2007 10:30	6:23	
	AshworthA	1/29/2007 12:5	7:52	
	AshworthA	1/30/2007 1:20:	:11 PM	
	BlackCL	1/30/2007 1:28:	:36 PM	
	DAWKINSO	1/30/2007 8:49:	:27 PM	
		CalcC BockJ wagarr BockJ BockJ AshworthA AshworthA BlackCL DAWKINSO BockJ AshworthA AshworthA BlackCL	CalcC         BockJ         1/24/2007 10:2           wagarr         IsBatched           BockJ         InPrep           BockJ         Prep1C           AshworthA         InPrep2           AshworthA         Prep2C           BlackCL         InCnt1           DAWKINSO         CalcC           BockJ         1/24/2007 10:3           AshworthA         1/29/2007 12:5           AshworthA         1/30/2007 1:20           BlackCL         1/30/2007 1:28	CalcC         BockJ         1/24/2007 10:28:56           wagarr         IsBatched         1/8/2007 2:46:09 PM           BockJ         InPrep         1/24/2007 10:28:56 AM           BockJ         Prep1C         1/24/2007 10:36:23 AM           AshworthA         InPrep2         1/29/2007 12:57:52 PM           AshworthA         Prep2C         1/30/2007 1:20:11 PM           BlackCL         InCnt1         1/30/2007 1:28:36 PM           DAWKINSO         CalcC         1/30/2007 8:49:27 PM           BockJ         1/24/2007 10:36:23           AshworthA         1/29/2007 12:57:52           AshworthA         1/30/2007 1:20:11 PM           BlackCL         1/30/2007 1:28:36 PM

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

2/1/2007 9:55:42 AM

# ICOC Fraction Transfer/Status Report ByDate: 2/1/2006, 2/6/2007, Batch: '7008356', User: *ALL Order By DateTimeAccepting

Q Batch Wo	rk Ord CurStat	us A	ccepting		Comments
7008356		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon			
4 <i>C</i>	CalcC	BockJ	1/22/2007 9:23	:51	
SC		wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC_RADCALC v4.8.26
SC		BockJ	InPrep	1/22/2007 9:23:51 AM	RICH-RC-5016 Revision 6
SC		BockJ	Prep1C	1/22/2007 9:34:03 AM	RICH-RC-5016 REVISION 6
SC		FABREM	Sep1C	1/23/2007 9:32:16 PM	RICH-RC-5006 REVISION 6
SC		DAWKINSO	InCnt1	1/23/2007 9:45:28 PM	RICH-RD-0007 REVISION 5
SC		StringerR	Cnt1C	1/24/2007 9:28:24 AM	RICH-RD-0007 REVISION 5
SC .		ManisD	Sep2C	1/30/2007 1:12:32 PM	RICH-RC-5071 REV 4
SC		DAWKINSO	InCnt2	1/30/2007 1:26:11 PM	RICH-RD-0003 REVISION 4
SC		BlackCL	CalcC	2/1/2007 7:26:20 AM	RICH-RD-0003 REVISION 4
AC		BockJ	1/22/2007 9:34	:03	
4 <i>C</i>		FABREM	1/23/2007 9:32	:16 PM	
4 <i>C</i>		DAWKINSO	1/23/2007 9:45	:28 PM	
4 <i>C</i>		StringerR	1/24/2007 9:28	:24	
4 <i>C</i>		DAWKINSO	1/30/2007 1:26	:11 PM	
4 <i>C</i>		BlackCL	2/1/2007 7:26:2	20 AM	

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.

1/30/2007 4:50:23 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/30/2006, 2/4/2007, Batch: '7008355', User: *ALL Order By DateTimeAccepting

Batch Wor	k Ord CurSta	tus A	ccepting		Comments
7008355					
4 <i>C</i>	CalcC	BockJ	1/22/2007 8:37	:53	
SC .		wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC_RADCALC v4.8.26
SC .		BockJ	InPrep	1/22/2007 8:37:53 AM	RICH-RC-5016 Revision 6
5C		BockJ	Prep1C	1/22/2007 8:45:51 AM	RICH-RC-5017 REVISION 5
SC .		AshworthA	InPrep2	1/29/2007 8:39:55 AM	RICH-RC-5017 REVISION 4
5C		AshworthA	Prep2C	1/30/2007 10:29:30 AM	RICH-RC-5017 REVISION 4
SC .		BlackCL	InCnt1	1/30/2007 10:47:19 AM	RICH-RD-0007 REVISION 5
SC .		BlackCL	CalcC	1/30/2007 1:00:18 PM	RICH-RD-0007 REVISION 5
IC .		BockJ	1/22/2007 8:45	:51	
4 <i>C</i>		AshworthA	1/29/2007 8:39	:55	
AC		AshworthA	1/30/2007 10:2	9:30	
AC		BlackCL	1/30/2007 10:4	7:19	
4 <i>C</i>		BlackCL	1/30/2007 1:00	:18 PM	

Page 1

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt:6 ICOCFractions v4.8.26 2/8/2007 10:34:38 AM

# ICOC Fraction Transfer/Status Report ByDate: 2/8/2006, 2/13/2007, Batch: '7008359', User: *ALL Order By DateTimeAccepting

Q Batch Work Ord	CurStat	us A	ccepting		Comments
7008359					
4 <i>C</i>	CalcC	BockJ	1/26/2007 9:07	:22	
SC		wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC_RADCALC v4.8.26
SC .		BockJ	InPrep	1/26/2007 9:07:22 AM	RICH-RC-5014 Revision 6
SC .		BockJ	Prep1C	1/26/2007 9:34:34 AM	RICH-RC-5017 REVISION 5
C C		BostedD	Prep2C	2/7/2007 2:45:41 PM	RICHRC5025 REV3
C C		StringerR	InCnt1	2/7/2007 2:52:11 PM	RICH-RD-0007 REVISION 5
CC .		DAWKINSO	CalcC	2/7/2007 8:37:25 PM	RICH-RD-0007 REVISION 5
iC		BockJ	1/26/2007 9:34	34	
1C		BostedD	2/7/2007 2:45:4	1 PM	
1C		StringerR	2/7/2007 2:52:1	1 PM	
4C		DAWKINSO	2/7/2007 8:37:2	5 PM	
AC		DAWKINSO	2/7/2007 8:37:2	5 PM	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

1/30/2007 11:09:07 AM

# ICOC Fraction Transfer/Status Report ByDate: 1/30/2006, 2/4/2007, Batch: '7008361', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStat	us Ad	ccepting		Comments
7008361						-
4 <i>C</i>		CalcC	BockJ	1/19/2007 6:57	:48	
SC			wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC_RADCALC v4.8.26
SC			BockJ	InPrep	1/19/2007 6:57:48 AM	rich-rc-5016 rEVISION 6
SC			BockJ	Prep1C	1/19/2007 7:11:03 AM	RICH-RC-5016 REVISION 6
SC			HarveyK	InSep1	1/19/2007 8:32:16 AM	RICH-RC-5065 REV5
SC :			FABREM	Sep1C	1/22/2007 6:16:40 PM	RICH-RC-5065 REVISION 5
SC			DAWKINSO	InCnt1	1/22/2007 6:21:08 PM	RICH-RD-0001 REVISION 3
SC			BlackCL	CalcC	1/25/2007 5:56:58 AM	RICH-RD-0001 REVISION 3
AC			BockJ	1/19/2007 7:11	:03	
4 <i>C</i>			HarveyK	1/19/2007 8:32	:16	
AC			FABREM	1/22/2007 6:16	:40 PM	
AC			DAWKINSO	1/22/2007 6:21	:08 PM	
AC .			BlackCL	1/25/2007 5:56	.58	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

Grp Rec Cnt:6 ICOCFractions v4.8.26 1/26/2007 1:42:45 PM

# ICOC Fraction Transfer/Status Report ByDate: 1/26/2006, 1/31/2007, Batch: '7008350', User: *ALL Order By DateTimeAccepting

Q Batch Work	Ord CurState	us Ad	ccepting		Comments
7008350					
CalcC		McDowellD	1/22/2007 9:13:12		
SC		wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC RADCALC v4.8.26
SC		McDowellD	InSep1	1/22/2007 9:13:12 AM	RICH-RC-5007 REVISION 6
SC		McDowellD	Sep1C	1/22/2007 1:26:32 PM	RICH-RC-5007 REVISION 6
SC		DAWKINSO	InCnt1	1/22/2007 1:46:01 PM	RICH-RD-0001 REVISION 3
SC		BlackCL	CalcC	1/25/2007 5:38:05 AM	RICH-RD-0001 REVISION 3
4C		McDowellD	1/22/2007 1:26	:32 PM	
AC .		DAWKINSO	1/22/2007 1:46	:01 PM	
4C		BlackCL	1/25/2007 5:38	:05	

AC: Accepting Entry; SC: Status Change

STL Richland

Richland Wa.

2/7/2007 8:53:17 AM

# ICOC Fraction Transfer/Status Report ByDate: 2/7/2006, 2/12/2007, Batch: '7008353', User: *ALL Order By DateTimeAccepting

Batch Work Ord CurStatus			Accepting		Comments				
7008353									
4 <i>C</i>	Cnt1C	BockJ	1/25/2007 7:34:	34	,				
SC		wagarr	IsBatched	1/8/2007 2:46:09 PM	ICOC_RADCALC v4.8.26				
SC		BockJ	InPrep	1/25/2007 7:34:34 AM	RICH-RC-5015 Revision 4				
SC		BockJ	Prep1C	1/25/2007 8:02:28 AM	RICH-RC-5015 REVISION 4				
SC		AntonsonL	InSep1	1/31/2007 1:52:43 PM	RICH-RC-5015 REVISION 4				
SC		AntonsonL	Sep1C	2/5/2007 2:43:55 PM	RICH-RC-5015 REVISION 4				
SC		NelsonT	Cnt1C	2/6/2007 2:53:46 PM	RICH-RC-5058 REV 7				
4 <i>C</i>	C BockJ		1/25/2007 8:02:28						
4 <i>C</i>		AntonsonL	1/31/2007 1:52:	43 PM					
4 <i>C</i>		AntonsonL	2/5/2007 2:43:5	5 PM					
4 <i>C</i>		NelsonT	2/6/2007 2:53:4	6 PM					

AC: Accepting Entry; SC: Status Change

STL Richland Richland Wa.